



BANGLADESH SUBMARINE CABLE COMPANY LIMITED (BSCCL)

BIDDING DOCUMENT

Name of the Service: Invitation of Bid for Leasing International Internet Bandwidth from Singapore for operation of BSCCL's IP Transit Service.

Date: -----

Tender No:

Issued To:

Date of Issue:

Bangladesh Submarine Cable Company Limited (BSCCL), Rahmans' Regnum Center (7th Floor), 191, Tejgaon-Gulshan Link Road, Dhaka-1208.

1. Invitation for Bid proposal and Instruction to the Bidders

- 1.1 Bangladesh Submarine Cable Company Limited (BSCCL) is an International Long Distance Communications (ILDC) and International Internet Gateway (IIG) operator in Bangladesh and is providing IPLC & IP Transit services through the Submarine Cable networks. BSCCL is member of SEA-ME-WE-4 and SEA-ME-WE-5 Submarine Cable consortium. In order to facilitate IP Transit services to its clients, BSCCL intends to get lease of International Internet Bandwidth from Singapore. Hence, BSCCL is floating this tender in order to purchase IP transit services from Singapore for a period of two years.
- 1.2 BSCCL will consider selecting two upstream providers in Singapore to ensure redundancy and better routing.
- 1.3 As BSCCL has already selected Hurricane Electric as one of its IP Transit service provider in Singapore, hence to ensure diversity in the up-link providers, Hurricane Electric is "**Not Eligible**" to participate in this bid.
- 1.4 Detail scope of work has been given in the subsequent paragraphs of the bid document.
- 1.5 The bidders are requested to follow the process for submission of the bid proposal mentioned in clause no. 7.

2. Method of Procurement: Restricted Tender (International).

3. Source of Fund: Company's Own Fund.

4. Eligibility Requirements of The Bidders

- 4.1 The bidder offering the IP transit service shall have the authority to sell the IP Bandwidth in Singapore.
- 4.2 The position of the bidder offering the IP transit service shall be within the first 20 in the latest ranking of CAIDA's AS ranking of July,2020 (available in <https://asrank.caida.org>).
- 4.3 The bidder must not have been declared bankrupt or filed for bankruptcy in any country. Bidders must submit documentary evidence/declaration in this regard.
- 4.4 The bidder must have the legal capacity to enter into a contract with BSCCL. Bidders must submit documentary evidence in this regard (such as documents showing that the bidder has the legal capacity to sell IP Transit service from Singapore).
- 4.5 Bidders registered in Israel or having their origin in Israel are not eligible for participation in this tender.

If any bidder fails to meet the eligibility requirements mentioned above in clause no. 4, the bid may be treated as "Non-Eligible".

5. Scope of Service Requirements For This Proposal

- 5.1 With a view to provide Internet bandwidth through SMW4 and SMW5 cable system, BSCCL intends to procure IP transit bandwidth at SG3 Data Center, Equinix Singapore.
- 5.2 BSCCL is going to install a router at SG3, Equinix of Singapore. The IP Transit services to be procured from the successful bidders will be terminated at the router of BSCCL in Singapore. The bidder will be responsible for cross-connect to connect the bidder's router ports to BSCCL router at SG3/SG1, Equinix, Singapore and the price of cross-connection (if



any) shall be included in the quoted NRC and/or MRC. BSCCL will use its own Submarine Cable capacity of SMW4 and SMW5 cables to bring the IP bandwidth from BSCCL's router at Singapore to Bangladesh.

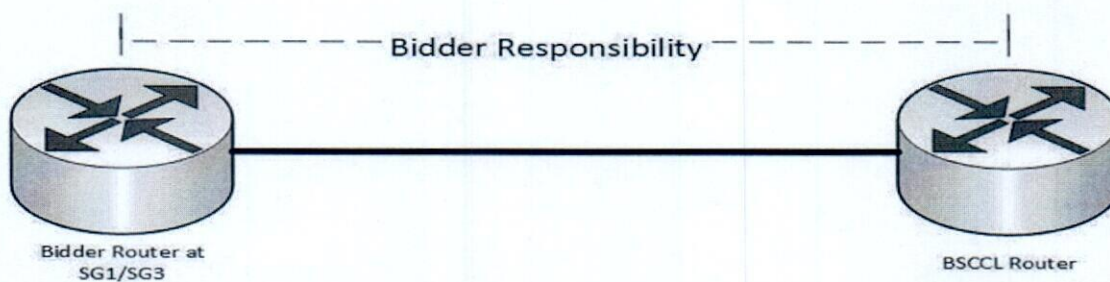
- 5.3 BSCCL will purchase IP transit service through 4x10G ports from Singapore. There is a probability of increasing the number of 10G ports on the basis of the requirements of BSCCL's customers. BSCCL will activate each 10G circuit whenever it is required within the two years after the signing date of the Contract with the successful bidders. Service of each activated 10G port will continue for two years from the date of activation.
- 5.4 BSCCL will select two successful bidders at Singapore to provide at least four numbers of 10G IP ports in the manner described in clause no 17.6. The circuits will be activated in the following manner and terms.

Serial No	Circuit Details	From Bidder
1	1 st Circuit	1 st Successful Bidder
2	2 nd Circuit	2 nd Successful Bidder
3	3 rd Circuit	1 st Successful Bidder
4	4 th Circuit	2 nd Successful Bidder

Each circuit will be activated initially for one year; then after successful completion of one year it will be renewed for another one year. But, if the performance of any circuit of any bidder (1st or 2nd Successful bidder for IP Transit at Singapore) is not satisfactory to BSCCL then the circuit will not be renewed for the second year, also no additional circuit will be activated with that bidder. If BSCCL needs more up-link circuits then the 1st Successful bidder will get preference if their service is satisfactory.

- 5.5 The following Diagram will illustrate the method of connection for providing the IP bandwidth:

For Singapore



Handwritten signatures and initials at the bottom of the page.

BSCCL is requesting the bidders to quote for the service as follows:

***Table 1: IP-Transit service in Singapore (All Price in USD)**

Data Center where BSCCL will take the service (1)	NRC (if any) (2)	MRC per Mbps for Committed (7.5 Gbps) Bandwidth		MRC per Mbps for Burstable (upto 2.5Gbps) Bandwidth		Total Price for 2 years (as per formula**) (7)	15% (VAT& TAX)*** (VAT: 7.5%, Tax 7.5%) (8)
		Year-1 (3)	Year-2 (4)	Year-1 (5)	Year-2 (6)		
Equinix SG1/SG3							

* Failure to include any price in the above mentioned table shall be considered that the bidder proposes to provide the service totally "free of charge" to BSCCL for the non-quoted item.

** Formula is given in Annexure-1

*** BSCCL will add the VAT & TAX of column (8) with the Total Price of column (7) for its internal use. If any bidder does not quote the VAT & TAX (column 8) or make any mistake in quoting for the VAT & TAX then BSCCL will add this item after necessary correction (if any correction is needed) in order to calculate the Evaluated price. BSCCL will pay the successful bidder on the basis of the Total Price of column (7) subjected to use of burstable BW.

--For evaluation purpose, price quoted in Annexure-1 will be considered.

--Definition of Committed bandwidth, Burstable bandwidth and 95th Percentile has been given in Annexure-3

5.6 The prices should be quoted as per table given in **Annexure-1**. Bidder needs to submit financial offer for each 10G circuit and financial evaluation will be carried out on the basis of Two years total price of one 10G circuit (column 7 above).

5.7 The offer shall include commissioning and testing of the ordered capacity on Router IP port to provide IP transit service to the Internet backbones complying with applicable international standards.

5.8 The asked Bandwidth must be symmetric.

6. Duration of IP Bandwidth Service Lease

6.1 The duration of contract period for purchasing of each 10G IP circuit/Port shall be maximum for 2 (two) years effective from the date of the Commissioning of the respective service.

6.2 The contract may be renewed for any duration (not less than one month) upon mutual agreement of both the parties after the expiry of the two years period.

7. Submission of Offer

7.1 The technical proposal and the financial proposal shall be submitted separately in two separate files mentioning the type of proposal (Technical or Financial). The hard copy of the offer shall be submitted in person or shall reach by postal mail to the following address within the date and time stipulated in the invitation notice;

Managing Director
Bangladesh Submarine Cable Company Limited
Rahmans' Regnum Center (7th Floor),
191, Tejgaon-Gulshan Link Road,
Dhaka-1208.

- 7.2 The bidder may also submit their offer in PDF format through email to the following addresses;
- tender@bsccl.com
 - And a copy (cc) to bsccl.tender@gmail.com

The late bids will not be considered for evaluation and will be rejected; the above email id will be blocked immediately after expiry of the time and date of Tender submission. The pdf file of the financial offer should be password protected. The password should be sent to md.bsccl@bsccl.com with a copy to bsccl.md@gmail.com not more than 24 hours earlier or not more than 1 (one) hour later than that of the bid closing time.

- 7.3 The bidder may submit the offer as per clause No. 5 above. The Bidder shall clearly mention the type of service (i.e. IP Transit service in Singapore) in the technical as well as in the financial offer.

8. Validity of The Offer

- 8.1 Price offer must remain valid for at least 120 (One hundred and twenty) days from the last date of submission of the bid. Bid validity shorter than the specified period shall be considered as **'Non-responsive'**. The bidders shall note that no bid security is required to participate in the bid.

9. Clarification of Offers

- 9.1 The evaluation committee of BSCCL may ask the bidder for any clarification regarding their offer if needed.
- 9.2 The request for the clarification and the response of the bidder may be through official letter or via email. The bidder must give their response to any query within the time period mentioned in the query. **Any failure may result in declaring their bid as "non-responsive"**.

10. Clarification And Amendment of The Bid Documents

- 10.1 Prospective Bidder requiring any clarification on the bid document may notify such queries to tender@bsccl.com copying bsccl.tender@gmail.com.
- 10.2 At any time at least 7 days prior to the deadline for submission of the bid, BSCCL may, for any reason whether at its own initiative or in response to a clarification requested by a prospective Bidder, amend/modify the bid document.
- 10.3 Any amendment of the bid document will be notified to all prospective Bidders and will be published in BSCCL's web site. Such amendment, if made, shall become an integral part of the bid document and will be binding on all prospective bidders. BSCCL reserves the rights to add/ delete/ modify any clause of the bid document.
- 10.4 In order to provide reasonable time to the prospective Bidders to take the amendment into account in preparation of their bids, BSCCL may at its own discretion, extend the deadline for the submission of the bid by any reasonable period.



11. Technical Requirements For The Services

11.1 Documents To Be Submitted With The Bid:

11.1.1 Clause by clause compliance statement for the relevant clauses related with the service with supporting document, if applicable, must be submitted by the bidders. If any bidder fails to submit supporting documents, then BSCCL may take their own decision on any matter as per their understanding.

11.1.2 Documents in support of bidder's eligibility mentioned in **clause 4** of this bid document.

11.1.3 A copy of network diagram showing interconnection points, backup links as well as diagram for Inter Asia, Asia to Europe, Asia to USA using Trans-Pacific route and Asia to USA using Trans-Atlantic route along with backbone capacity and redundancy. Details about Diversity and Redundancy in the Internet Bandwidth should be provided for evaluation purposes and shall form part of the agreement.

11.1.4 Copy (ies) of the Service Level Agreement (SLA) and any other agreements/documents to be signed by both BSCCL and the successful bidder, containing at least the requirements stated in those documents. Moreover, the SLA will include at least the following Parameters:

- Round Trip Delay/Network Latency
- Packet Loss
- Throughput
- Service availability
- Planned Maintenance window

11.2 **Service Availability, RTD, Throughput & Packet Loss (for bidders offering IP Transit service):**

11.2.1 Service Availability, RTD, Throughput & Packet Loss:

RTD shall be measured by computing the average RTD for one thousand (1000) pings of sixty-four (64) bytes each. In case of International Internet Bandwidth, this will be measured from the BSCCL Gateway Router at Dhaka to the different destinations mentioned as below:

SL No.	Destination	From BSCCL Gateway Router
1	USA West Coast (Trans Pacific)	240~260 ms
2	USA East Coast (Trans-Atlantic)	280~300 ms
3	Asia Pacific (Singapore)	50~65 ms
4	Asia Pacific (Hong Kong)	80~90 ms
5	Asia Pacific (Japan)	140~160 ms
6	Asia Pacific (China)	190~220 ms
7	Asia (India)	120~140 ms

The bidder must submit snapshot of trace report to the IP address (mentioned in **Annexure-2**) with their proposal from their proposed peering router for BSCCL at Singapore. If the bidder doesn't submit the information then TEC of BSCCL will use the bidder's looking glass to acquire the latency information.

If any bidder fails to meet the latency mentioned above, the bid will be treated as "Non-Responsive".

11.2.2 Packet Loss:

The average monthly packet loss to the last hop router in any PoP of the successful bidder shall be less than 0.3%, measured from the IP gateway router port of BSCCL Equinix PoP. Packet Loss shall be measured by computing the percent loss of one thousand (1000) pings (with acknowledgment for each previous packet received) of sixty-four (64) bytes each.

11.2.3 Throughput

The bidder shall provide an un-contended bandwidth (1:1) with guaranteed throughput of the contracted bandwidth capacity as measured on physical layer. Bidder shall guarantee a throughput of contracted bandwidth on 1:1 Full Duplex (both ways) on 24 hours x 7 Days basis.

11.2.4 Availability

Services shall be provided at a guaranteed level (except for the planned maintenance). In the event that service level falls below guaranteed level due to International Backhaul, IP PoP, Transmission Equipment, Latency etc. the following compensation shall be payable to BSCCL:

Cumulative Downtime in any Calendar Month	Compensation equivalent to Prorated monthly rental charge
Up to 10.0 minutes	Nil
10.1 minutes – 4 hours	1 day's charge
4 hours – 12 hours	3 day's charge
More than 12 hours	3 day's charge plus 1 day's charge for each full hour beyond 12 hours

*1 day's charge shall be calculated dividing the monthly recurring charge by 30 (thirty)

11.2.4.1 The service would be assumed to be unavailable if RTD/Packet Loss is not met continuously as per specification for a period of 30 minutes. If RTD/Packet Loss varies intermittently for period less than 30 minutes between acceptable to unacceptable limits and if such behavior is observed continuously for one hour then service will be considered to be unavailable for one hour. Each slab of unavailability of thirty minutes or part thereof observed over a period of six months shall be taken into account for calculating the liquidated damages for service degradation.

11.2.4.2 The planned maintenance should not exceed once in a quarter and maximum allowable outage due to the planned outage is 0.45% of total hours in any quarter (3.24 hours). Any planned outage beyond 0.45% shall be considered as unavailability for the purpose of calculating service unavailability credits.

11.2.4.3 In case the above-mentioned parameters exceed for consecutive three months then BSCCL shall have the right to terminate the Service Agreement with the Service provider.

- 11.2.4.4 Compensation due for failure to meet "Availability" or "Round-trip delay" or "Packet Loss" or "Throughput" requirements will be adjusted from periodic rental charge payment of the respective bidder.
- 11.2.4.5 The total maximum aggregated compensation payable by respective bidder to BSCCL in any month shall not exceed total monthly recurring charge (MRC). The combined cumulative compensation to be issued during the contract period shall be limited to 20% of the total contract value.
- 11.2.4.6 Failures, interruptions, defects or delays in transmission due to any of the following reasons shall not be counted toward the calculation of service downtime
- SMW-4 or SMW5 cable cuts
 - Any Force Majeure event
 - Any interruptions resulting from defects or failures in Bangladesh end Backhaul or BSCCL end equipment in Bangladesh or in Singapore.
 - Any service modification or alteration through mutual agreement between BSCCL and Service provider
- 11.2.4.7 The bidder shall provide BSCCL necessary access to the router looking glass.
- 11.2.4.8 The bidder is required to provide comprehensive service support on 24 x 7 basis from the date of commencement of the services for the entire agreement period without any additional fees and charges.
- 11.2.4.9 In order to protect from DDoS attack mitigation, the bidder have to allow remote Black holing of malicious IP addresses (any between /24 to /32) through BGP announcements from BSCCL end. Black holing can be done based on community or separate black-hole BGP peering.
- 11.2.4.10 The successful bidder shall support dual stack IPv6 & 4-Byte ASN implementation in addition to IPv4 and 2-Byte ASN.
- 11.2.4.11 The successful bidder shall submit Escalation Matrix to communicate any fault related issues.
- 11.2.4.12 The bidder shall carry out any service affecting schedule maintenance in its network between 04:00 and 07:00 Hrs (GMT+6) and schedule maintenance window must notify BSCCL before at least 3 (three) Bangladesh working days (Sunday to Thursday) in advance. Otherwise, schedule maintenance carried out outside the above-mentioned time frame shall be taken into calculations of service availability credits.
- 11.2.4.13 All Scheduled testing requirements shall be notified at least 7 days prior to the testing. Test plans shall be provided at least seven business days prior to the test.
- 11.2.4.14 The service provider shall provide the mechanisms to BSCCL, to measure and monitor the SLA requirements mentioned above.

12. Lead Time To Establish The Service

- 12.1 The bidder, in the bid, shall indicate clearly the lead-time to establish the service after work order is issued to them, which should not be more than 2 (two) weeks after issuance of Work Order or after signing of the service order form.
- 12.2 There will have minimum three days of testing period of each circuit after commissioning of a circuit. Charging will start after the successful completion of the testing.
- 12.3 Within this test period the problem (if any) need to be resolved.



13. Financial Proposal

- 13.1 Bidder must submit the offer per 10G IP Port basis.
- 13.2 All prices must be quoted in US Dollars.
- 13.3 The bidder shall bear any applicable tax and duties payable at Singapore, from where the bidder will provide the service.
- 13.4 Amount of discount, if any, must be clearly mentioned
- 13.5 Bids with any conditional price offer shall be treated as '**Non-responsive**'.
- 13.6 The evaluation will be conducted in consideration to all recurring and non-recurring charges over a period of two years contract period for one 10G circuit.
- 13.7 The bidder shall submit the financial offer as per the table provided in Annexure-1.

14. Bills and Payments

- 14.1 BSCCL will pay the recurring charges monthly on post-paid basis. The supplier (successful bidders) shall show the VAT and Tax payable in Bangladesh separately (using standard currency conversion rate of Bangladesh Bank on the date of invoicing) in his invoice. BSCCL will make payment after deducting the VAT and Tax payable in Bangladesh. The NRC (if any) shall be included in the invoice of the first month's MRC.
- 14.2 When a monthly charge applies for a portion of a billing month (whether due to an installation or discontinuation of service during the billing month, a rate change during the month or otherwise) the partial charge is to be calculated based on a daily rate (1/30th of monthly charge).
- 14.3 Invoices shall be submitted by the Bidder headed billing@bsccl.com making a copy to billing.bsccl@gmail.com within 10 days after end of each month.
- 14.4 The burstable usages information including graph and calculation of raw data (as per Annexure -3) shall be mailed to billing.bsccl@gmail.com.
- 14.5 BSCCL will deduct applicable VAT & taxes at source (TDS) as per Bangladeshi laws and credits (BSCCL will deduct 7.5% VAT and 7.5% TAX). BSCCL will pay the bills within 30 working days from the date of issuing the bill.
- 14.6 If there is any dispute in any bill BSCCL will raise objection in writing within 30 (Thirty) days of receiving the invoice. However, the undisputed amount will be paid within 30 days of receiving the invoice.

15. BSCCL reserves the rights to accept or reject any or all bids without assigning any reason whatsoever.

16. Date of Submission:

- 16.1 Last Date & Time for submitting the bid: **As per Tender Notice and/or subsequent amendments of the notice (if any).**
- 16.2 Date & Time for opening the bid: **As per Tender Notice and/or subsequent amendments of the notice (if any).**



17. Evaluation of the offers and award of the contract

- 17.1 The Technical Evaluation Committee (TEC) will first examine the technical proposals of the bids received within the prescribed date and time to determine the eligibility against the eligibility requirements mentioned in **clause 4 above**. Only the **"Eligible"** bids will be considered for further evaluation. The evaluation committee will then examine every **"Eligible"** bid to determine their conformity against different requirements of the bid document regarding, scope, required documents and technical & financial requirements. Any negative determination regarding a bid may result in declaration of the bid as **"Non-Responsive"**.
- 17.2 Only the bids to be determined as **"Responsive"** after this stage of general and technical evaluation will be considered for financial evaluation. During financial evaluation, the evaluation committee will check the financial offers of the responsive bids to determine their conformity against the requirements of BSCCL mentioned in the bid document. The committee will also check and correct the arithmetic errors, if any. If any arithmetic error is found during examination, the evaluation committee will make necessary correction and will inform the concerned bidder regarding the error and the proposed correction. If the bidder refuses to accept the proposed correction then his bid will be declared as **"Non-Responsive"** by the TEC.
- 17.3 Upon completion of financial evaluation the TEC will determine the **"Evaluated Price"** for each responsive bid. During determination of Evaluated price the VAT & Tax (total 15% on the Total price of each 10G circuit) will be taken into consideration. If any bidder doesn't quote for VAT & TAX, BSCCL will add the 15% VAT & TAX with the Total corrected (if there is any correction) quoted price in order to determine the Evaluated price. For Evaluation purpose the Evaluated price will be calculated in **US Dollar** only. Hence, the bidder shall quote the price in US Dollar only. Bidders shall note that the **"Evaluated Price"** may not be the same as the **"Quoted Price"**. After determination of the **"Evaluated Price"** for each responsive bid, the evaluation committee will list the responsive bids in chronology of the **"Evaluated Price"** with the lowest value of the **"Evaluated Price"** at the top of the list; the bidder with the next higher value of the **"Evaluated Price"** shall be in second place and so on.
- 17.4 **Determination of the 1st Successful Bidder:**
- 17.4.1 The bidder who's Proposal has been considered **"Eligible"** as well as **"Responsive"** and has the lowest value of the **"Evaluated price"** shall be declared as the **"1st Successful Bidder"** for this bid.
- 17.5 **Determination of the 2nd Successful Bidder:**
- 17.5.1 The bidder who's Proposal has been considered as **"Eligible"** as well as **"Responsive"** and who is the 2nd lowest bidder in terms of Evaluated price shall be considered as the **"2nd Successful Bidder"** for this bid provided that the Evaluated price of his bid is not more than 10% higher than that of the lowest bidder (**1st Successful bidder**).



17.5.2 If the Evaluated price of the 2nd lowest bidder mentioned in clause 17.5.1 is more than 10% higher than that of the lowest bidder (1st Successful bidder), then the TEC of BSCCL will offer the "Eligible" as well as "Responsive" 2nd lowest bidder, a price which is 10% higher than that of the lowest bidder (1st Successful bidder). If the 2nd lowest bidder accepts the mentioned offered price of BSCCL then the bidder will be declared as the **"2nd Successful Bidder"** for this bid. If the "Eligible" as well as "Responsive" 2nd lowest bidder doesn't accept BSCCL's offer then the TEC of BSCCL will give the same offer to the "Eligible" as well as "Responsive" 3rd lowest bidder. If the 3rd lowest bidder accepts BSCCL's offer then the bidder will be declared as the **"2nd Successful Bidder"** for this bid. If the "Eligible" as well as "Responsive" 3rd lowest bidder doesn't accept BSCCL's offer then the same process will be carried on for the other "Eligible" as well as "Responsive" bidders chronologically on the basis of the Evaluated prices of their bids until any "Eligible" as well as "Responsive" accepts BSCCL's offer. If no "Eligible" as well as "Responsive" bidder accepts BSCCL's offer, the management of BSCCL will take their next decision at their own.

17.6 The TEC of BSCCL shall clearly recommend for the **"1st Successful Bidder"** and **"2nd Successful Bidder"** (if it is possible to select the 2nd Successful bidder following clauses 17.5.1 or 17.5.2 above) mentioning the Total Evaluated Price of the Successful Bidders in their Evaluation Report. The Convener of the TEC will submit the Evaluation Report with recommendations to the HOPE with a forwarding letter.



Annexure-1

Financial Offer for IP Transit Service from Singapore side:

Option 1: Up to 2.5 Gbps Burstable Bandwidth with 7.5 Gbps Committed (for each 10G IP Port)
(All Price in USD):

Data Center where BSCCL will take the service (1)	NRC (if any) (2)	MRC per Mbps for Committed (7.5 Gbps) Bandwidth		MRC per Mbps for Burstable (upto 2.5Gbps) Bandwidth		Total Price for 2 years (as per formula*) (7)	15% (VAT& TAX)*** (VAT: 7.5%, Tax 7.5%) (8)
		Year-1 (3)	Year-2 (4)	Year-1 (5)	Year-2 (6)		
Equinix SG1/SG3							

Formula= NRC + (12 x Per Mbps Committed MRC x 7500 for 1st yr + 12 x Per Mbps Burstable MRC x 2500 for 1st yr) + (12 x Per Mbps Committed MRC x 7500 for 2nd yr + 12 x Per Mbps Burstable MRC x 2500 for 2nd yr)

Legends:

NRC = Non Recurring Charge
MRC = Monthly Recurring Charge
Eastern Location = SG3, Equinix, Singapore
LS= Landing Station

Annexure-2

a. For Singapore Circuits:

Sl.	Country/Region	Country/Region IP Address	Bidder IP Address	Latency
1	USA West Coast (Trans Pacific)	136.24.173.174		
2	USA East Coast (Trans-Atlantic)	173.52.206.98		
3	Asia Pacific (Singapore)	161.117.70.136		
4	Asia Pacific(Japan)	210.130.163.146		
5	Asia Pacific (Hong Kong)	59.148.233.201		
6	Asia Pacific (China)	220.181.38.148		
7	Asia Pacific (India)	23.63.108.193		

N.B:

- Bidders need to share its looking glass/route server information (url/ip address).
- BSCCL will add extra 50ms to reach BSCCL Gateway Router at Dhaka while evaluating the latency for Singapore circuits.
- Bidder need to measure the latency from bidder's gateway router located at Singapore and need to share the snapshot of trace report within the proposal.



Annexture-3

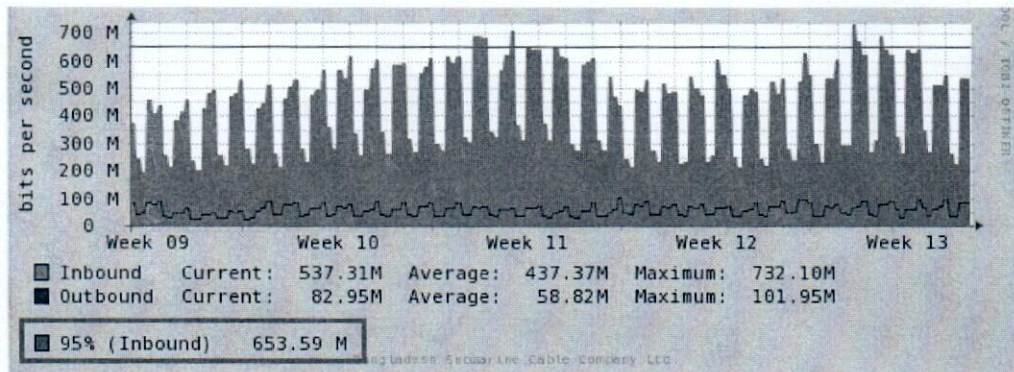
Definition of Committed Bandwidth: Committed Bandwidth means the Bandwidth usage committed to by provider on a monthly basis, as specified in the Order Form.

Definition of 95th percentile: 95th Percentile is a widely used mathematical calculation to evaluate the regular and sustained bandwidth utilization of a connection. According to 95% rule, the monthly samples are sorted; the top 5% both the inbound and outbound traffic samples are discarded; and the next highest remaining data sample on either the inbound or outbound is the "95th Percentile" value. This number is used as the basis for the calculation of any additional monthly charges. If the 95th percentile number falls below the minimum monthly committed amount, no additional charges will occur.

Definition of Burstable Bandwidth: Burstable bandwidth means that there is no limit (i.e. cap) as to how fast data transfer can occur. The only limits will be the physical limits of the hardware and the network connections themselves. Burstable bandwidth will be calculated as below formula:

Burstable Bandwidth = 95th percentile of Bandwidth usage – Committed Bandwidth

Example:



If a customer has committed to 600Mbps per month as per Order Form and according to the MRTG data samples for one month and sorts them from highest to lowest, discarding the top 5%. For the purpose of this example, the 95th percentile for the month is 653 Mbps. The company will bill the customer for the additional charges of 653 Mbps, minus the previously invoiced 600Mbps of contractually committed bandwidth, or 53 Mbps. The 53Mbps is treated as burstable bandwidth and will be invoiced for.