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*INFORMATION MEMORANDUM*

**THE AWARD OF 2100 MHZ, 1800  
MHZ AND 850 MHZ SPECTRUM:  
THE NEXT GENERATION MOBILE  
SERVICES AWARD (NGMSA)**

Pakistan, 25<sup>th</sup> February 2014

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# PTA – Next Generation Mobile Services Award (NGMSA)

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## 1 Executive summary

### 1.1 Preamble and purpose

Pakistan Telecommunication Authority (PTA), established by the Federal Government of Pakistan (GoP) under Section 3 of the Pakistan Telecommunication (Reorganization) Act, 1996 (“The Act”) and working under policy directives from the GoP, is planning to undertake an auction to award Licenses to use spectrum in the 2100 MHz, 1800 MHz and 850 MHz ranges and to grant the successful bidders rights to establish, maintain and operate Next Generation Mobile Networks (NGMN) and to provide Next Generation Mobile Services (NGMS) across Pakistan. The process of the award is titled the Next Generation Mobile Services Award (NGMSA) and it will be overseen by the Advisory Committee as per the policy directives by the Government of Pakistan (GoP).

This Information Memorandum (IM) from PTA sets out the rules, process, planned timetable and other background information to help prospective Applicants decide if they wish to apply to participate in the NGMSA. Annex A provides an overview of the Pakistan’s telecommunication sector.

The information in this IM should not be used as the basis of an investment decision. Readers are advised to seek their own expert advice on whether or not to participate in the award process and on any other matters concerning financial, legal, technical or other implications of the award process and associated policies.

PTA welcomes comments on this IM till the final submission date specified in Section 1.5. PTA may also conduct an information session for prospective Applicants to explain the auction process and rules and to respond to all Applicants’ questions and concerns. This information session may take place after the IM is published and its only purpose will be to clarify any questions that prospective Applicants may have about the application process and auction itself.

Note that specialist terms used in this IM are defined in Section 7.

### 1.2 Legal framework

The legal framework applicable to all Applicants is:

- The Pakistan Telecommunication (Re-Organization) Act 1996, including all Rules and Regulations made thereunder from time to time
- All relevant policies / directives of GoP
- All PTA determinations/directives/guidelines/SOPs issued from time to time.
- For information, the key organizations of the institutional framework, in addition to PTA, are the Ministry of Information Technology (MoIT) and the Frequency Allocation Board (FAB). The functions of these three organizations are described on their respective websites.

PTA: <http://www.pta.gov.pk>

MOITT : <http://www.moitt.gov.pk>

FAB: <http://www.fab.gov.pk/>

All documents relevant to the legal framework are available on the PTA website. For convenience, some are listed below, with a hyperlink to their location on the website:

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[Mobile Cellular Policy \(2004\)](#)<sup>1</sup>

[Broadband Policy \(2004\)](#)<sup>2</sup>

[Spectrum Auction for Next Generation Mobile Services in Pakistan \(Oct 2013 and Feb 2014\)](#)<sup>3</sup>

## 1.3 Overview of the spectrum included in the award

The NGMSA is for Licenses to use spectrum from three internationally harmonised bands. The spectrum included in the NGMSA comprises:

- 2x30 MHz of paired spectrum in the 2100 MHz band
- 2x20 MHz of paired spectrum in the 1800 MHz band
- 2x7.38 MHz of paired spectrum in the 850 MHz band (offered for new entrant(s) only)

The 1800 MHz has been included in the NGMSA to promote and facilitate the early introduction of 4G services in Pakistan. For getting Spectrum in 1800 MHz band, bidder needs to win 2x10 MHz Spectrum in 2100 MHz band.

The current allocation of these spectrum bands is defined in the Pakistan Table of Frequency Allocations<sup>4</sup> which is consistent with the International Telecommunications Union (ITU) allocations for Region 3. The Table of Frequency Allocations provides for all of these bands to be allocated to mobile services on a primary basis in Pakistan.

## 1.4 Award process

The 15 year Licenses to use the NGMSA spectrum will be awarded by means of a two stage auction process.

### PREQUALIFICATION STAGE INCLUDING A SEALED BID OFFER

In the prequalification stage, Applicants will be required to provide information as per the application form given in Annex B. Each Applicant will also be required to submit along with their application an irrevocable Sealed-bid offer for the maximum amount of spectrum in the 2100 MHz and 1800 MHz that it would like to bid for in the auction. The Sealed-bid Offer must comprise at least 2x10 MHz of spectrum in the 2100 MHz band. Applicants will also be required to submit a Pre-bid Deposit at this stage for 15% of the total value of the Sealed-bid Offer given in Annex E.

The information submitted by Applicants will be assessed by PTA and those considered suitable for participation and have submitted the correct Pre-bid Deposit will be informed within a week that they have qualified for the Auction Stage.

### AUCTION STAGE

If overall spectrum demand from the Sealed-bid offers can be accommodated within the offered spectrum PTA will award the spectrum rights to the qualified applicants directly in a manner that ensures contiguous spectrum holdings for the offered spectrum in each band, if possible. However, PTA reserves the right to modify, amend, supplement, cancel, annul or replace any or all of the auction process at any stage without incurring any liability to the affected bidders or any obligations thereunder what so ever.

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<sup>1</sup> See [http://www.pta.gov.pk/media/Mobile\\_Cellular\\_Policy\\_Jan\\_28\\_2004.pdf](http://www.pta.gov.pk/media/Mobile_Cellular_Policy_Jan_28_2004.pdf)

<sup>2</sup> See <http://www.pta.gov.pk/media/bbp.pdf>

<sup>3</sup> See

<http://www.moit.gov.pk/gop/index.php?q=aHR0cDovLzE5Mi4xNjguNzAuMTM2L21vaXQvdXNlcmZpbGVzMS9maWxlL3BvbGJjaWVzLzlwMTMvUG9saWN5JTlwRGlyZWNOaXZlLnBkZg%3D%3D>

<sup>4</sup> See [http://www.pta.gov.pk/media/Pakistan\\_Table\\_of\\_Frequency\\_Allocations.pdf](http://www.pta.gov.pk/media/Pakistan_Table_of_Frequency_Allocations.pdf)

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Where overall demand is greater than the spectrum offered in either of the bands, PTA will conduct a Simultaneous Multiple Round Ascending (SMRA) auction to assign the spectrum rights. Sections 3 and 4 of the IM describe this process in detail.

### UNSOLD SPECTRUM

PTA retains the right to hold or dispose of any unsold or unpaid for spectrum from the NGMSA as it sees fit.

## 1.5 Overview of timescales

PTA reserves the right to determine the overall timetable of the award, taking account of the circumstances prevailing at the time. However, in order to assist potential bidders in the preparation of their applications, Table 1 below provides an indication of the intended process timetable.

**Table 1: Timeline for the NGMSA Process**

Process step	Timeline
Publication of Information Memorandum	February 25, 2014
Consultation period ends	March 10, 2014
Notification of changes to the NGMSA rules and procedures if any.	March 17, 2014
Information session for prospective bidders (last opportunity for bidders to ask questions and get clarification on specifics of the auction.)	March 19, 2014
Deadline for Prospective applicants to submit Application form and Sealed-bid Offer with Pre-Bid deposits(Annex B and Annex E)	March 25 , 2014 (4 pm Pakistan Standard Time)
PTA notifies qualified applicants	March 28, 2014
Bidder packages containing confidential information and instructions to participate in the mock auction and auction is provided to qualified applicants	April 1, 2014
Mock Auction for Qualified Bidders	April 3, 2014
Auction starts	April 7, 2014
Provisional winners announced	On completion of the auction
License payments due	According to the schedule established in Section 2.6 of this IM.
Granting of Licenses	Within 30 days of having received the 50% or 100% payment of the Initial Spectrum Fee as appropriate

*These dates are subject to change as deemed necessary by PTA.*

## 1.6 Measures to promote market entry, innovation and competition

The NGMSA will promote market entry, innovation and competition through a number of GoP policies and directives. These include, but are not limited to:

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### **MARKET ENTRY**

A Potential *New Entrant(s) in the Cellular Mobile Market* gaining spectrum in the NGMSA would have the right to negotiate national GSM and GPRS roaming with an existing Operator. A NGMSA licensee that is a Market Entrant will also have a longer period in the short term to fulfil rollout obligations.

### **SPECTRUM CAPS**

Spectrum caps would be determined after the sealed bid stage.

### **NATIONAL ROAMING**

It is a condition of the NGMSA that any existing Operator that obtains a NGMSA License must enter into good faith negotiations to provide GSM and GPRS national roaming if requested by a *New Entrant(s) in the Cellular Mobile Market*. All Operators are permitted to negotiate national roaming agreements with one or more other Operators. If no such agreement can be reached after negotiation in good faith between the Operators, then *New Entrant(s) in the Cellular Mobile Market* may request PTA to determine the price and terms of such agreement.

### **INTERNATIONAL ROAMING**

Operators shall use their best efforts to enter into the necessary agreements with foreign operators in order to enable and provide international roaming. Operators must follow PTA guidelines on international roaming which may be issued from time to time.

### **INFRASTRUCTURE SHARING**

Infrastructure sharing shall be considered as a matter of first priority by the Operators at the time of roll out. The NGMSA Licensees are required to share infrastructure with other operators as per PTA's directives and guidelines.

### **MOBILE VIRTUAL NETWORK OPERATORS (MVNOs)**

Commercial arrangements for MVNOs will be in line with the [Framework for MVNO Services in Pakistan](#), as revised by PTA from time to time.

### **NUMBERING**

If NGMSA spectrum rights are awarded to an existing Operator, then numbers already allocated to that Operator may also be used for NGMSA services. This will enable the Operator to upgrade the service of its existing users from GSM and GPRS. If an Operator instead wishes to have separate numbers for NGMSA services, the numbers shall be allocated to it from the National Numbering Plan relating to mobile cellular services. New Operators can request numbering series as per the procedure and regulations devised by PTA. All *New Entrant(s) in the Cellular Mobile Market* shall be provided a unique network identity code.

### **MOBILE NUMBER PORTABILITY (MNP)**

The Operators shall implement number portability with all Operators for NGMSA subscribers on the first anniversary of their License Effective Date. For this purpose, all Operators are required to contribute to the Pakistan Mobile Database (PMD) Company in accordance with MNP Regulations.

### **QUALITY OF SERVICE (QoS)**

All those who win the spectrum for NGMS shall provide services with QoS defined in section 2.3.

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### **1.7 Structure of the Information Memorandum**

The remainder of this NGMSA IM is structured as follows:

Section 2 – description of spectrum available and the Operator License templates

Section 3 – description of the NGMSA process

Section 4 – detailed rules of the auction stage

Section 5 – legal terms & conditions, including payment terms, relating to the NGMSA

Section 6 – detailed application instructions

Section 7 – definition of terms



## 2 License description

### 2.1 License structure

#### 2.1.1 Overview

A License for spectrum awarded in the NGMSA provides exclusive use of the frequencies licensed to that Operator. The services permitted are governed by each specific License (see 2.1.3 & 2.1.4 below). The territorial extent of each License is the whole of Pakistan **excluding** Azad Jammu & Kashmir (AJK) and Gilgit Baltistan (GB).

#### 2.1.2 License duration

The duration of the License shall be fifteen (15) years from the License Effective Date, renewable on terms & conditions applicable under GoP policy applicable at the time of renewal.

#### 2.1.3 NGMSA License

See Annex F for a NGMS License template. If there are any differences between the License rights and obligations described in the IM and Annex F, then the definition in Annex F shall prevail.

### 2.2 Definition of spectrum being offered

Pakistan's current frequency assignments are available on FAB website ([www.fab.gov.pk](http://www.fab.gov.pk)). Offered Spectrum for the auction is given in Section 1.3.

#### 2.2.1 Limitations on use

The spectrum to be auctioned will give the successful Operator a License to build, own and operate a technology-neutral network and offer licensed services to consumers only for the Next Generation Mobile Services for which it is permitted.

The assigned spectrum must not be used to provide Fixed Services<sup>5</sup> or any services not explicitly authorized by the license conditions.

The License shall be personal to the licensee and shall not be assigned, sub-licensed to, or held on trust for another person, without the prior written approval of PTA.

#### 2.2.2 The Lot definition, spectrum packaging and spectrum caps

As part of the consultation process to determine the number and bandwidth of the spectrum lots that should be made available, PTA took into account a number of factors, including but not limited to the following:

**Competition** – Competition is essential to ensure service quality and value within Pakistan.

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<sup>5</sup> The provision of telecommunications services by means of a fixed connection or a wireless system providing public fixed network connections to consumers.

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**Market Demand.** – The Telecommunications markets in Pakistan are highly competitive and it is PTA’s goal to release the necessary spectrum to the mobile operators for the continuation of quality services and expansion of their networks for provision of high quality Next Generation Mobile Services.

**Efficiency** – PTA seeks to ensure that spectrum is granted to those who value it the most and who will make the most efficient and effective use of it. Awarding the spectrum via a technology-neutral auction for the next generation services ensures that parties placing the most commercial value on the spectrum acquire it.

**Investment** – PTA wishes to encourage the maximum possible efficient investment in future mobile cellular services across Pakistan, as these will help drive improved economic and social conditions across the country.

PTA has decided to assign 2x30 MHz of spectrum from the 2100 MHz band and 2x20 MHz from the 1800 MHz band. The 2x7.38 MHz in 850 MHz band will be allocated only to a new Market Entrant (In case of multiple potential Market Entrants, the Spectrum will be offered through a mechanism defined by PTA and GOP among the potential Market Entrants).

Spectrum will be allocated as specific lots, structured on the following basis:

**Table 2: Frequency lots included in the NGMSA**

Spectrum Band	Spectrum quantity	Spectrum Floor
2100 MHz	2x30 MHz	2x10 MHz
1800 MHz	2x20 MHz	2x10 MHz
850 MHz	2x7.38 MHz	2x7.38 MHz

Operators are required to make Initial Sealed-Bid Offers at the time of application for a minimum of 2x10 MHz of 2100 MHz spectrum; in addition requirements for more spectrums may only be specified in multiples of 5 MHz for the 2100 MHz band. Only successful bidders of 2100 MHz spectrum shall be qualified to obtain 1800 MHz spectrum in the NGMSA.

### 2.2.3 Technical requirements

The spectrum in the NGMSA will be assigned on a technology neutral basis for next generation mobile services; however some constraints are required for spectrum management reasons.

Technologies implemented shall use the Frequency Division Duplex (FDD) access method and be compliant with the out-of-block (OOB) emission limits stipulated in the relevant ETSI, ANSI, ITU, 3GPP, 3GPP2, IEC standards. The Licensee shall be solely responsible for meeting all regulatory obligations and preventing any harmful radio frequency interference caused by its network’s base stations to other users of the radio frequency spectrum. The Licensee will also be required to make all reasonable efforts to coordinate use of the spectrum with operators using adjacent frequencies as identified by the FAB.

The Licensee shall operate radio communication apparatus and devices in compliance with all requirements of the Authority and the Board pertaining to emissions, frequencies of operation, base station site clearance, technical characteristics, power and aerial characteristics.

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The Licensee shall allow inspection of any premises by a representative of the Authority at any time and shall furnish to the representative such information as may be required by PTA.

### 2.3 Coverage and quality of service obligations

PTA is keen to encourage the provision of advanced data services throughout Pakistan. Operators that obtain spectrum in the NGMSA will be obliged to rollout their networks as defined in the License, a template for which is attached at Annex F.

The rollout obligations vary depending on whether the Operator is Cellular Mobile Operator or *New Entrant(s) in the Cellular Mobile Market* and the spectrum obtained. NGMSA Licensees that obtain rights to use 2100 MHz spectrum shall provide the quality of service defined in the License within the geographic areas and rollout schedule detailed in Table 3.

**Table 3: Minimum rollout obligations associated with 2100 MHz spectrum**

Phase	Time from the Effective Date		Coverage requirements
	Existing Cellular Mobile Operator	Market Entrant	
First phase	6 months	1 year	Coverage of the cities of Islamabad, Karachi, Lahore, Peshawar and Quetta and Ten (10) further cities, one of which must be located in each of the four provinces.
Second phase	1 year and 6 months	2 years	Provide coverage of 80% of District headquarters
Third phase	4 years	5 years	Provide coverage of 90% of Tehsil headquarters

Licensees that obtain rights to use 1800 MHz spectrum shall provide the quality of service defined in the License within the geographic areas and rollout schedule detailed in Table 4.

**Table 4: Minimum rollout obligations associated with the 1800 MHz spectrum**

Phase	Time from the Effective Date		Coverage requirements
	Existing Cellular Mobile Operator	Market Entrant	
First phase	1 year	1.5 years	Coverage of the cities of Islamabad, Karachi, Lahore, Peshawar and Quetta and Ten (10) further cities, one of which must be located in each of the four provinces.
Second phase	2 years and 6 months	3 years and 6 months	Provide coverage of 80% of District headquarters
Third phase	5 years	6 years	Provide coverage of 90% of Tehsil headquarters

Licensees that obtain rights to use 850 MHz spectrum shall provide the quality of service defined in the License within the geographic areas and rollout schedule detailed in Table 5.

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**Table 5: Minimum rollout obligations associated with the 850 MHz spectrum**

Phase	Time from the Effective Date	Coverage requirements
	For a Market Entrant Operator	
First phase	1 year	Coverage of the cities of Islamabad, Karachi, Lahore, Peshawar and Quetta and Ten (10) further cities, one of which must be located in each of the four provinces.
Second phase	2 years	Provide coverage of 80% of District headquarters
Third phase	3 years and 6 months	Provide coverage of 90% of Tehsil headquarters

The licensee shall maintain the quality of service within the rollout areas as defined in the Operator's License. This will include Key Performance Indicators (KPI) to ensure that voice and data performance levels achieve the standard throughout the rollout areas. KPI thresholds must be achieved in each District within the rollout as summarised in Table 6.

**Table 6: Quality of Service requirements / KPIs**

QOS parameter	Requirements
<b>General network requirements</b>	
Network down time	Less than 1% of time
Network accessibility	Greater than 99%
<b>Voice requirements</b>	
Grade of Service (end to end blocking)	Must not exceed 2% during peak hours
Service accessibility	Greater than 98%
Call connection time	Less than or equal to 5 seconds
Call completion ratio	At least 98% of call shall complete without being dropped.
Mean Opinion Score (Average of, Average A2B plus Average B2A)	Better than 3. As recommended by ITU-T in recommendation number P.862.2 ( PESQ), P.862.3 (POLQA) or latest ITU/Relevant forum recommendation
<b>SMS</b>	
SMS success rate	Greater than 99%
End to end SMS delivery time	Less than 8 seconds
<b>Broadband data service performance</b>	
RAB setup success rate	Greater than 98%
Session abnormal release rate	Less than 2%
Handover success rate	Greater than 98%
Inter System Handover (ISHO)	Greater than 97%
<b>Broadband data service requirements for a NGMSA licensee with 2100 MHz spectrum</b>	
Minimum data throughput	A minimum user data rate of 512 kbps must be achievable over 90% of locations within the defined coverage area.
<b>Broadband data service requirements for a NGMSA licensee with 1800 MHz spectrum</b>	

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QOS parameter	Requirements
Minimum data throughput	A minimum user data rate of 2 Mbps must be achievable over 90% of locations within the defined coverage area.
<b>Broadband data service requirements for a NGMSA licensee with 850 MHz spectrum</b>	
Minimum data throughput	A minimum user data rate of 1 Mbps must be achievable over 90% of locations within the defined coverage area.

A full list of performance requirements is defined in the NGMSA License template in Annex F and can be amended from time to time.

### 2.4 Other obligations

#### NATIONAL ROAMING

Clause 3(ix) of the Spectrum Auction for Next Generation Mobile Services Policy Directive (2013) stipulates that an existing licensee would provide national roaming on request by any Potential New Market Entrant or as directed by PTA, as deemed appropriate. In accordance with this clause, it is a condition of the NGMSA that any existing Operator(s) must enter into good faith negotiations with the new entrant to provide GSM and GPRS/EDGE national roaming if requested by a Potential Market Entrant. If no agreement is reached following such negotiations, then PTA will determine the price and terms of the agreement.

Any Operator is free to negotiate a commercial arrangement with one or more other Operators for national roaming. Clause 6.5 of the Mobile Cellular Policy (2004) encourages national roaming as a means of creating nationwide services as expeditiously as possible at mutually acceptable terms to the Operators involved.

#### INTERNATIONAL ROAMING

Operators shall use their best efforts to enter into the necessary agreements with foreign operators in order to enable and provide international roaming. Details will be provided to PTA as and when required. Operators must follow PTA guidelines on international roaming as may be issued from time to time.

#### INFRASTRUCTURE SHARING

A NGMSA Licensee is required to share its existing and future infrastructure with other NGMSA Licensees. At minimum, the infrastructure to be shared shall be: site sharing and mast sharing, as defined by the GSM Association<sup>6</sup>. PTA cannot fetter its discretion about whether to permit active network sharing, such as RAN sharing or network sharing, but PTA will listen supportively to any proposals from Operators for sharing of active networks and decide.

The precise commercial structure of any bilateral or multilateral infrastructure sharing is to be agreed between the Operators involved and then presented to PTA for approval. By way of non-binding illustration, such a structure could possibly be outsourced to a third party, a separately-run joint venture of the Operators, a regional division of lead responsibility by Operators, or a site-by-site commercial arrangement, or some other agreement. If the Operators cannot reach commercial agreement, then PTA will direct the commercial principles and arrangements for infrastructure sharing.

#### LOCAL MANUFACTURING AND R&D

The NGMSA Licensee should encourage local manufacturing and R&D by ensuring that an adequate percentage of the equipment (both on the network side and devices) used is locally manufactured.

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<sup>6</sup> <http://www.gsma.com/publicpolicy/wp-content/uploads/2012/09/Mobile-Infrastructure-sharing.pdf>

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### MOBILE VIRTUAL NETWORK OPERATORS (MVNOs)

Commercial arrangements for MVNOs will be in line with the [Framework For MVNO Services In Pakistan](#), as revised by PTA from time to time.

## 2.5 License terms and conditions

The service obligations defined in the License templates are summarised in Table 7. These are presented in detail in the License template in Annex F.

**Table 7: Other service obligations**

Obligations	Requirements
Emergency services	Provision of mandatory emergency services as determined by PTA
Lawful interception	Cooperation with Law Enforcement Agencies.
Non-discrimination	The services shall not discriminate between end-users, in particular with regard but not limited to, quality, availability and reliability of the service.
Tariffs	Tariffs must be offered in accordance with Telecom Consumer Protection Regulations 2009 and other related regulations/determinations. The Tariffs shall not be predatory or anti competitive.
Billing	Provision of detailed and precise billing to end-users upon request.
Data protection	Compliance with laws regarding privacy and data protection.
Provision of information	The licensee shall provide technical details for the deployed network equipment upon request. The licensee shall provide up to date information regarding network coverage.
Interconnection	The licensee shall provide interconnection for voice services as defined in the License and data connection to the public internet.
Manufacturing in Pakistan	Obligations with regard to supporting the development / growth of mobile handset and telecom equipment manufacturing in Pakistan as determined by PTA in consultation with all stakeholders.
Site clearance	Obligations with regard to clearance of cell sites as per Standard Operating Procedure of PTA/FAB.
Access for inspection	The licensee shall provide reasonable access to all radio equipment for inspection upon request.
National security	Obligations with regard to national security.
Relations with customers	Requirements for the Licensee to submit standard service contracts to PTA for approval.
Performance Bond	The Licensee will provide performance bonds as described in Section 5.3 to ensure that network coverage obligations are met.
Network Coverage	The Licensee shall identify its coverage area to its customers.

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### 2.6 Fees

Table 8 below describes the relevant fees associated with the NGMSA.

**Table 8: Fee structure**

Fee/charges	Amount due
Initial Spectrum Fee	<p>The Winning bidder shall pay the Initial Spectrum Fee (the Auction Winning Price) to the Authority.</p> <p>The Licensee may opt for 100% payment of the Initial Spectrum Fee given in clause 4.1.1 of the License as a onetime upfront amount within 30 days of the Auction.</p> <p>OR</p> <p>Pay 50% payment of the Initial Spectrum Fee given in clause 4.1.1 of the License within 30 days of the Auction and the remaining 50% of the Initial Spectrum Fee is payable in 5 equal annual instalments with cumulative mark up rate at the rate of one year LIBOR rate + 3% for the period from the Effective Date of the License to the payment date.</p> <p>Initial Spectrum Fee shall be paid in US Dollars. Bank guarantee has to be submitted for the instalments.</p>
Annual License Fee	<p>The Licensee shall pay to the Authority an amount equivalent to 0.5% of the Licensee's annual gross revenue from Licensed Services minus inter operator payments and related PTA / FAB mandated payments, as Annual License Fee. This deduction will be allowed if these amounts have actually been paid and not on accrual basis. However, Initial Spectrum Fee, Initial License Fee, leased line charges, late payment additional fee, penalties, collection charges, and other expenses imposed by PTA, if any, shall not be deducted from the gross revenue.</p>
Universal Service Fund (USF) Contribution	<p>The Licensee shall pay annual Universal Service Fund contribution to the Federal Government, an amount equivalent to 1.5% of the Licensee's annual gross revenue from Licensed Services minus inter operator and related PTA / FAB mandated payments. This deduction will be allowed if these amounts have actually been paid and not on accrual basis. However, Initial Spectrum Fee, Initial License Fee, leased line charges, late payment additional fee, penalties, collection charges, and other expenses imposed by PTA, if any, shall not be deducted from the gross revenue;</p>
R&D Fund Contribution	<p>The Licensee shall contribute an amount equivalent to 0.5% of the Licensee's annual gross revenue from Licensed Services minus inter operator and related PTA/FAB mandated payments to the Authority for Research and Development Fund managed by the Federal Government. This deduction will be allowed if these amounts have actually been paid and not on accrual basis. However, Initial Spectrum Fee, Initial License Fee, leased line charges, late payment additional fee, penalties, collection charges, and other expenses imposed by PTA, if any, shall not be deducted from the gross revenue;</p>
Annual Spectrum Administrative Fee (ASAF)	<p>The Licensee shall also pay Annual Spectrum Administrative Fee (ASAF) on the basis of the proportion of spectrum allocated to the Licensee out of the total spectrum allocated to all Cellular Mobile Operators and NGMS Licensees to recover 75 % of FAB's total budgeted expenditure for the next Financial Year. The ASAF will fall due on 1<sup>st</sup> of June every year for the next financial year and is payable in advance latest by 30th June of every year.</p>
Annual Numbering Charges	<p>For each number allocated to the Licensee, the Licensee shall pay at commencement of each financial year the Annual Number Charges as mentioned in the Numbering Allocation and Administration Regulations, 2011, as amended from time to time. The annual Numbering Charges will fall due on the first of June every year and are payable latest by 30<sup>th</sup> of June every year.</p>

## PTA – Next Generation Mobile Services Award (NGMSA)

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### 2.7 Base prices

Radio spectrum is a scarce public resource. As such PTA views it appropriate to require anyone seeking use of the spectrum to pay an amount commensurate with the opportunity cost of the spectrum. The Base Price for each lot is detailed in Table 9. These Base Prices will be the starting prices for each lot offered in the auction as specified below.

**Table 9: Base prices**

Spectrum Band	Spectrum quantity	Base Price
2100 MHz	2x10 MHz	USD 295 Million (USD 29.5Million / MHz)
1800 MHz	2x10 MHz	USD 210 Million (USD 21.0 Million / MHz)
850 MHz	2x7.38 MHz	USD 291 Million

No lots will be sold at a price lower than the Base Prices shown in Table 9:



## 3 Award process

### 3.1 Overview of the NGMSA process

The award process will consist of the following 8 steps:

#### 1. Consultation period

The consultation period will start with the publication of the information memorandum on the date indicated in the auction award timetable of Section 1.5. During this period prospective bidders will be allowed to submit comments and questions to PTA. PTA may respond to questions and comments and publish the same on the website without providing the identity of the party making the question or comment. No prospective applicant will receive special treatment or receive special information from PTA in this process.

PTA reserves the right to determine what comments are relevant and require modification of the NGMSA process and auction rules.

All questions and comments can be submitted by email and/or in writing to the following addresses:

In writing with an envelope labeled “NGMSA Process Consultation” and sent to

Director General (Licensing)  
Pakistan Telecommunication Authority  
H/Qs F-5/1, Islamabad 44,000  
Pakistan  
Phone: (+92 51) 2878128  
Fax: (+92 51) 2878129

By email with “NGMSA Process Consultation” as Subject and sent to:

[ngmsa@pta.gov.pk](mailto:ngmsa@pta.gov.pk)

Queries received 24 hours before the end of the consultation period and will be responded by publishing on PTA’s dedicated spectrum auction website:

<http://www.pta.gov.pk/spectrumauction>

#### 2. Information session for prospective bidders

Following the consultation period there will be an information session for prospective applicants so that they can better understand the application process and the auction rules. This session would be the last opportunity for prospective applicants to ask questions and get clarification on specifics of the application process and rules. During this session PTA will only respond to clarification questions related to the award process itself and only prospective applicants will be allowed to participate.

Applicants must register with PTA prior to attending this session by sending an email to:

[ngmsa@pta.gov.pk](mailto:ngmsa@pta.gov.pk)

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### 3. Application Process

The application procedure will start on the date indicated in section 1.5. This will allow sufficient time for prospective applicants to evaluate the business opportunity and to prepare the required documentation to participate in the auction.

The application process will comprise two stages. In Stage 1, applicants must submit by the date indicated in the award timetable of Section 1.5 both *Annex B “Application Form”* and *Annex E “Sealed-bid Offer”* of this IM along with all the required supporting documentation. Applicants are also required to submit a Pre-bid Deposit at this stage. PTA will review the Application Form and the Sealed-bid Offer and if PTA deems an applicant qualified to participate in the auction and it has paid the correct Pre-bid Deposit, then PTA will proceed to notify that applicant that they have qualified to participate in the auction. In Stage 2, PTA will consider the Sealed-bid Offers submitted and decide whether or not the next auction stage is necessary.

#### Stage 1: Qualification of applicants

##### Application Form

On their applications forms, applicants will be asked to provide an Authorised Contact Representative for purposes of receiving all information related to the auction and also the bidder information package if qualified to participate in the auction. Please note that this main contact person need not be the Applicant’s Authorised Representative or CEO, but rather a person that can be fully available during the entire auction process.

Upon receipt of the application forms, PTA will review whether or not the applicant complies with all the requirements. Where an application is deficient, PTA may ask the applicant to provide any missing information or additional documentation. Applicants will provide the information requested as per timetable at section 1.5.

##### Sealed-bid Offer

Along with their application forms, applicants must complete the *Sealed-bid Offer Form* in *Annex E* of this IM, where applicants will be asked to state how many multiples of 2x5 MHz segments of 2100 MHz spectrum it is willing to buy at the base prices. The minimum amount a bidder can state in its Sealed-bid Offer is 2x10 MHz of 2100 MHz spectrum. Note that stating interest in at least 2 segments (2x10 MHz) in 2100 MHz band is a requirement to participate, and that an applicant is bound to buy at least 2x10 MHz in the 2100 MHz band. The spectrum included in the sealed bid offer is a binding commitment.

Applicants must also submit a Pre-bid Deposit for 15% of the base price of the amount of spectrum they stated in their Sealed-bid offer in order to qualify to participate in the auction. Pre-bid Deposits are due at the same time as the Application submission date.

If PTA determines that the award process will proceed to the Auction stage, the total amount of MHz indicated in 2100 MHz band will translate into that bidder’s initial eligibility points for the auction. An applicant, if qualified to participate in the auction, will be bound to bid its full eligibility in the first round of the auction.

Winners of the 2x10MHz lots in the 2100 MHz band may be afforded an opportunity to purchase 2x10 MHz in the 1800 MHz band only if they stated interest in the 1800 MHz spectrum in their Sealed-bid Offer.

## **PTA – Next Generation Mobile Services Award (NGMSA)**

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### **Stage 2: Qualification of applicants to participate in auction stage or granting of Licenses due to no excess demand**

PTA will notify applicants if they have qualified after the applications are received as indicated in section 1.5.

After the qualification process PTA will review the Sealed-bid Offers from qualified applicants and determine whether the auction should proceed into the next auction stage.

If as a result of the Sealed-bid Offers review, PTA determines that the auction stage will not proceed, then the PTA will proceed with step 6 below.

If PTA's decision is to proceed into the auction stage, PTA will notify pre-qualified applicants that submitted the correct pre-bid deposit that they have qualified to participate in the auction on the date indicated in the award timetable in Section 1.5.

PTA will provide qualified bidders with an information package containing their confidential information to participate in the mock auction and actual auction, including confidential login credentials, the electronic auction system bidding manual, the time and bidding schedule for the mock auction and actual auction.

The qualified applicants bidder manual will provide all relevant information about the electronic auction system, login instructions, step by step description on how to submit bids and download the auction round data via the electronic auction system, including a detailed description of round data output files that will be provided at the end of each bidding round. Qualified applicants will also have a chance to experience the auction software by participating in a mock auction prior to the actual auction start.

PTA will communicate to the qualified applicants contact representative the procedure by which the "Confidential Information Package" will be provided.

### **4. Mock auction for Qualified applicants**

Qualified applicants will be asked to participate in mock auction bidder training session. At the mock auction bidders will get to know the bidding software, test their bidding and communication facilities and practice their internal bidding procedures (as per section 1.5). PTA will provide instructions to participate in mock auction as part of the "Confidential Information Package".

### **5. Auction**

The auction will start on the date indicated in Section 1.5. Prior to the auction start, Qualified Applicants will be provided with information on the exact date and time and schedule for the first day of bidding.

Access to the electronic auction system will be open the day before the auction to allow participants to test their connections and log in credentials. The auction system will reopen the day of the auction at least two (2) hours before the opening of the first round of bidding. The electronic auction system will not allow any participant to submit any bids until PTA opens the first round of the auction at the time indicated in the schedule.

PTA will provide instructions to participate in auction as part of the "Confidential Information Package".

During the auction bidders submit bids for spectrum lots as described in Section 4.

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### **6. Provisional winners are announced**

In the case where the auction is not required due to no excess demand, applicants that submitted a Sealed-bid Offer supported by a correct pre-bid deposit will be awarded the amount of spectrum stated in their Sealed-bid Offers for the 2100 MHz band at the Base Price, and for the 1800 MHz lots the Government reserves the right to hold the spectrum for a future auction or award it as deemed appropriate.

Where an auction is required at the close of the auction, winning bidders will be notified via the electronic auction system of the 2100 MHz lots won and the price payable for each lot won. The winners of the two designated 2x10MHz lots in the 2100 MHz band lots will be offered an opportunity to purchase an 1800 MHz lot.

The Initial Spectrum Fee is the sum of all amounts payable by an individual bidder for spectrum obtained in the NGMSA.

### **7. License payment**

Payments will be according to the schedule established in Section 2.6 of this IM.

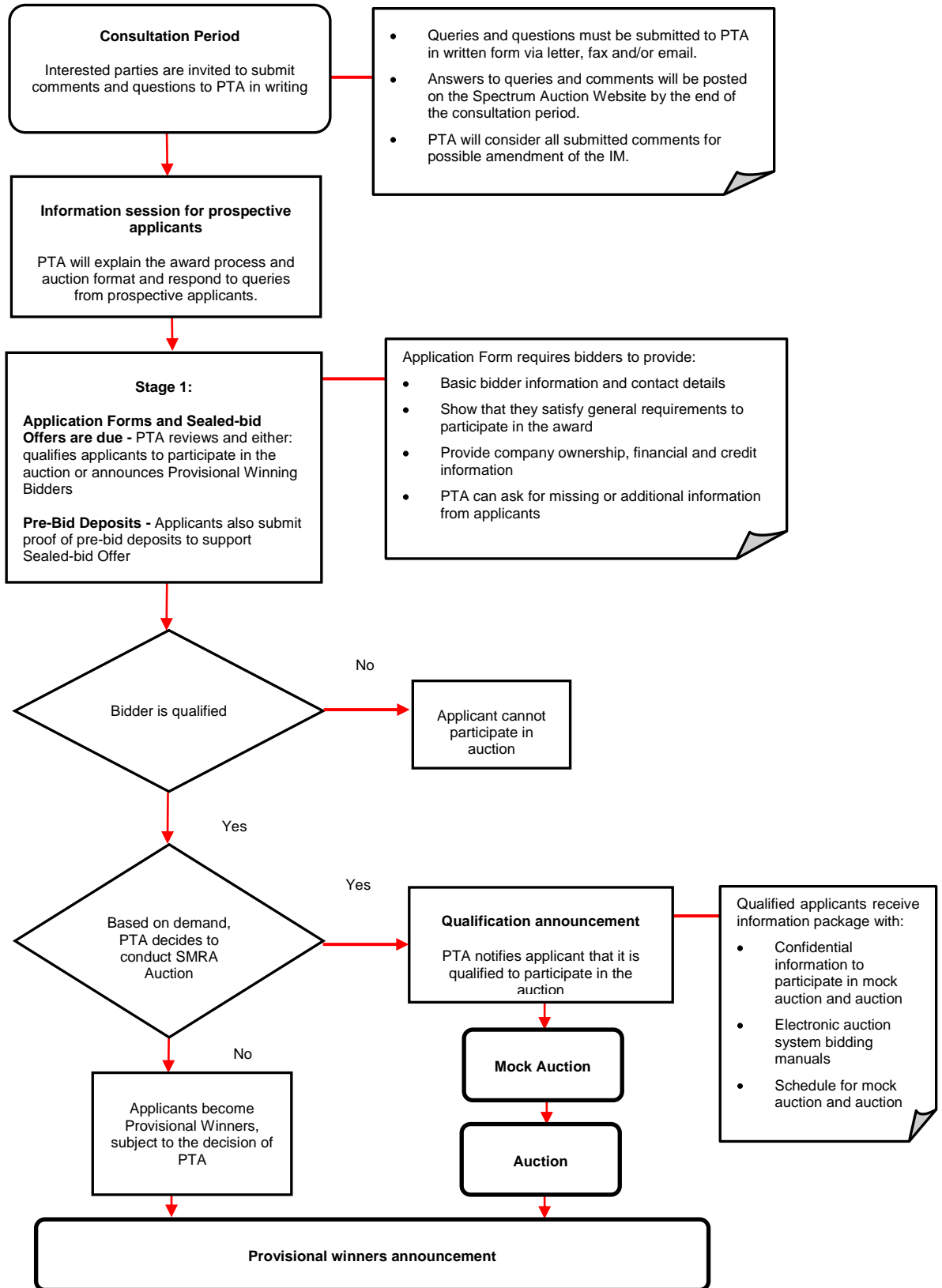
### **8. Grant of Licenses**

Licenses will be granted within 30 days of having received the 50% payment of Initial Spectrum Fee.

The application process is shown in Figure 1 on the following page.

# PTA – Next Generation Mobile Services Award (NGMSA)

Figure 1: Application process flow chart



### **3.2 Overview of the Auction and bidding procedure**

The auction format selected by PTA for NGMSA is a multi-round, multi-object auction, with simultaneous bidding for all lots where bidding occurs over the internet. This auction format is commonly referred to as a Simultaneous Multiple-Round Ascending (SMRA) Auction. The SMRA format is “simultaneous” because it assigns all lots together in a single process. The SMRA format is a “multiple-round ascending bid” auction because it offers bidders the opportunity to submit bids, in response to ascending prices, over successive bidding rounds. The auction does not have a predetermined number of rounds, since bidding continues as long as there are new bids submitted at least for one of the lots available.

The auction will be conducted through an electronic auction software system, allowing bidders to submit bids securely over the Internet. Bidders will be able to connect to the auction bidding site through the Internet using a standard web browser (e.g. Internet Explorer, Google Chrome, etc.). To that end bidders only need access to a fast and reliable Internet connection. No other hardware or software will be required in order to participate in the auction.

Only qualified bidders will be able to log into the electronic auction system at the date and time indicated by PTA. Bidders will login into the auction system using their confidential login credentials provided by PTA upon qualification. Bidders will only be able to place bids during the bidding window of a round. At the end of the first bidding window and all subsequent bidding rounds, bidders will be provided with the round result information.

### **3.3 Emergency bidding**

If a bidder faces communication difficulties during the auction, PTA will accept emergency bidding over the phone with fax bid signed and stamped verification and confirmation. Details of the emergency bidding procedure will be provided to qualified applicants.

### 4 The SMRA auction rules

#### 4.1 The Lots

In the First Stage of the NGMSA, bidders indicate in their Sealed-bid Offers, the amount of spectrum in multiples of 2x5 MHz from the 2100 MHz band and amount of spectrum in multiples of 2x10MHz from the 1800 MHz band they are willing to acquire at the announced base prices and support this with a pre-bid deposit.

PTA will decide on the number of 2100 MHz lots to be allocated in the SMRA auction after the sealed-bid stage of the process. Lots will be 2x5 MHz and/or 2x10 MHz in bandwidth.

Each lot available in the auction will have a number of points associated to it. More specifically each 2x5 MHz unit of 2100 MHz spectrum will count as one (1) eligibility point.

If a bidder states in the Sealed-bid Offer that it has interest:

- in obtaining a License for 2x10 MHz of 2100 MHz spectrum at the base price of the auction, that bidder will start the auction with two (2) eligibility points
- in obtaining a License for 2x15 MHz of 2100 MHz spectrum at the base price of the auction, that bidder will start the auction with three (3) eligibility points
- in obtaining a License for 2x20 MHz of 2100 MHz spectrum at the base price of the auction, that bidder will start the auction with four (4) eligibility points

The exact configuration of lots will be decided by PTA after reviewing the Sealed-bid Offers.

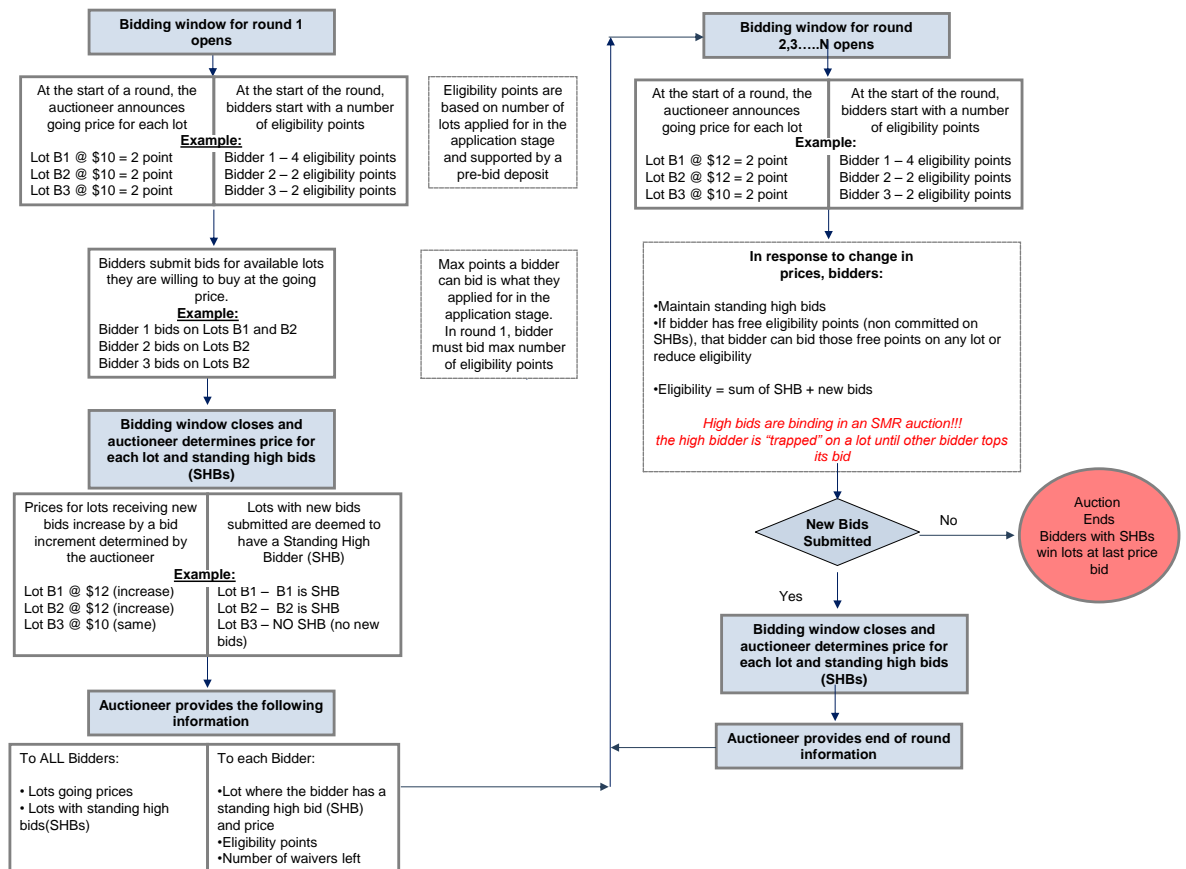
#### 4.2 SMRA Auction bidding mechanics

The bidding rounds in an SMRA auction are as follows:

- Bidding happens in series of rounds.
- Bidders start the auction with a number of points “eligibility points”.
- In each round, bidders place bids at the announced price for the number of lots they wish to acquire based on their eligibility points.
- A bid is an offer to purchase one or more specific lots at the announced price.
- Bidders can only bid up to their eligibility less than the number of points of their Standing High Bids. If there is only one new bid on a lot the bidder placing that bid will be the standing high bidder (SHB) for that lot going into the next round. If there is more than one bid for a particular lot, the SHB will be determined randomly. The standing high bidder will remain as such until another higher bid is placed on that same lot in a subsequent round.
- The price for lots with new standing high bids will increase from round to round.
- PTA will determine the price increments from round to round.
- No information about total demand from the previous round bid will be made available to bidders after each round.
- The auction will have an "activity rule", to penalize bidders who are inactive by reducing their "eligibility points".
- The rounds continue until there is a round in which there is no activity (no new bids or waivers are submitted).
- The standing high bidders on each lot at the close of bidding will be deemed the provisional winners of those lots.

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Below is a schematic to show how bidding proceeds in an SMRA auction. Please note that the lots and prices used are just for illustration purposes.



## 4.3 Information provided to bidders before the auction

Prior to the auction start bidders will receive the following information:

- The schedule for the first day of bidding
- Information on the identities of all qualified bidders
- Each bidder will receive information on their individual eligibilities and required activity for round 1 of the auction.
- The base price for each lot available
- The bid increments that will be applied from round to round.

## 4.4 Bidder's Eligibility

The number of lots stated in the Sealed-bid Offers stage and supported by a Pre-bid Deposit will constitute that bidders "initial eligibility" for the auction. After the Sealed-bid Offers stage qualified bidders will be approved for an initial eligibility of points depending on the amount of MHz in the 2100 MHz band they stated



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they were interested in buying at the base price. This initial eligibility will be binding for the first round of the auction. This means that a bidder must place bids in the first round for lots totalling its initial eligibility.

### **4.5 A bidding round**

Bidding rounds will have a fixed start time and end time. Bidders will have until the end time of a round to submit a bid. Bidders can modify their bids within the bidding window. However, the last bid recorded by the software system will be deemed the valid bid.

A bidding period will be followed by a reporting period. During the reporting period, participating bidders will receive information on the previous round.

### **4.6 Bids and Standing High Bids**

A bid is an offer to purchase one or more specific lots at the announced price. In every round, bidders will select the lots they are willing to purchase at the announced price and for which they have sufficient eligibility points to bid on.

If a lot receives a bid at the announced price for that round, the bidder submitting the bid will become the standing high bidder (SHB) of that lot. In case of several bids on the same lot, one of the bidders placing a new bid will be randomly determined to be the SHB by the auction system.

At the end of the bidding period the SHB will be informed that is such in its individual bidders report. However, non SHBs will only know there is an SHB on that lot but won't know the identity of the SHB.

If a bidder is a holder of Standing High Bid, that bidder will only be allowed to bid eligibility points that are not committed in a standing high bid.

### **4.7 Bids and bid increments**

If a lot receives a bid in a round, the bidder or one of the bidders making that bid will become the SHB and the price for that lot will increase by a fixed increment in the next round. The price increment rules will be determined for each round by PTA. PTA will inform qualified bidders via the Auction Management System of the minimum and maximum increments that will be applied to lots that receive new bids on a round.

By placing a new bid, the bidder indicates that it is willing to purchase those lots at the current price for that round, i.e. the price announced by PTA for each lot via the electronic auction system at the start of the bidding round.

A bid is a binding offer that cannot be rescinded.

### **4.8 Round 1 minimum bids**

As described in Section 3, each qualified bidder will be informed of the base prices, which are the minimum bids for Round 1 and indicate how many 2x5 MHz and 2x10 MHz lots they are willing to buy at the base price. No lot will be sold for less than the base price. When a lot receives a bid in subsequent rounds, the minimum bid is increased over the last bid submitted by an increment.

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Section 2.6 on base prices establishes the minimum bid for the auction, which will be the base price that applies for each lot in the first bidding round of the auction.

A bidder will be required to bid its full eligibility in round 1 of the auction. The bidding software will not allow a bidder to submit a bid in round 1 of the auction that is lower than a bidder's initial eligibility, which is equivalent to the amount committed in the Sealed-bid Offers stage. If a bidder fails to submit a valid bid in round 1 of the auction, PTA reserves the right to submit the bid on the bidder's behalf.

### 4.9 Bids After round 1

After the first round and subsequent rounds, bidders should maintain activity or their eligibility will be reduced. A bidder's eligibility can never increase; it can remain the same or decrease as the auction progresses. A bidder reduces eligibility points as the auction progresses and prices increase.

If the auction closes with unallocated lots, PTA will revert to the Sealed-bid Offers. Bidders that reduced eligibility after round 1 would still be bound to purchase the spectrum indicated in their Sealed-bid Offers and the precise lots awarded to each bidder would be determined by PTA.

### 4.10 Activity Requirements

Bidders will be required to maintain 100% activity in each round or lose eligibility. A bidder's eligibility in one round will be equal to its activity in the previous round. As a bidder can never bid on more points than for which it has eligibility, the bidder's eligibility for one round is therefore the minimum of its eligibility and activity from the previous round.

A bidder must bid on the number of lots equal to their current eligibility points or their eligibility will be reduced for the next round. For example, if a bidder is eligible to bid for 2x20 MHz and only bids for 2x10 MHz in a round, that bidder will only be able to bid for 2x10 MHz in the next round and all remaining rounds of the auction. Thus, eligibility points lost cannot be recovered.

### 4.11 Activity

A bidder is considered to be active on a lot in a round if either it has the standing high bid from the previous round or places a new bid in the current round. Bidders are allowed to bid on any lot by using their free eligibility points or reduce points from round to round. Free eligibility points are those that are not tied up to a lot where a bidder is the SHB. The points associated with the SHB are already committed and cannot be bid on other lots. For instance if a bidder has eligibility of 3 points and there are two (2) 2x10 MHz lots and two (2) 2x5 MHz lots available in the auction, that bidder may:

- Have a SHB on a 2x10 MHz lot and therefore must bid one point on a 2x5 MHz lot or its eligibility will be reduced by one point
- Have a SHB on a 2x5 MHz lot and therefore must bid two points on a 2x10 MHz lot or its eligibility will be reduced by two points
- Have a SHB on a 2x5 MHz lot and bid on a 2x5 MHz lot and its eligibility will be reduced by one point
- Have no SHBs and therefore be allowed to bid three points on any combination of 2x10 and 2x5 MHz lots, or bid on fewer lots and reduce eligibility.

The above example doesn't mean that the 2100 MHz lots will be split under this configuration. The exact configuration of lots will be decided by PTA after reviewing the Sealed-bid Offers.

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### 4.12 Information provided to bidders at the end of each round

At the end of each bidding period, bidders will receive the following information:

- Lots with standing high bidders and the next round price for every lot
- If a lot has received one or more new bids
- Current eligibility will be reported to each bidder individually
- Standing high bidder identities will not be provided

### 4.13 Waivers

When a bidder fails to meet the activity target, that bidder may avoid losing eligibility by submitting a waiver proactively using the electronic auction system. Waivers can thus act as a “time-out,” allowing a bidder to not bid in a round. Bidders will be granted three (3) waivers in this auction.

A waiver cannot be submitted in the first round of the auction.

### 4.14 Close of the auction

Under normal circumstances, when a round concludes with:

- (a) no bids being submitted;
- (b) no proactive waivers having been submitted.

The standing high bidder on each lot upon the close of bidding will be declared the Provisional Winner of that lot.

### 4.15 Final Allocations

The Provisional Winners will be awarded the 2100 MHz lots for which they had a SHB at the end of the SMRA phase. Each Provisional Winner will be required to pay the highest submitted bid that the bidder offered during the SMRA for those lots.

Should lots be unallocated at the end of the SMRA, bidders whose initial eligibility exceeded the points of their SHBs will be randomly allocated the unallocated lots at the base price or the highest price bid by that bidder whichever is highest.

## **5 Legal terms and conditions**

### **5.1 Important notice**

This Information Memorandum is for information purposes only. It does not form part of any contract, whether explicit or implied. Terms and conditions in a NGMSA License will prevail if there is a discrepancy between the License and this IM. The information in this IM should not be used as the basis of an investment decision. Readers are advised to seek their own expert advice on whether or not to participate in the award process and on any other matters concerning financial, legal, technical or other implications of the award process and associated policies.

PTA does not warrant the accuracy of the information herein, and PTA reserves the right to update or amend or modify or add or omit any information in this IM before the auction commences. Any such change, alteration, modification, amendment, addition, omission, supplemental or replacement or any deletion will be communicated to the prospective Applicants via PTA website or any other mode of communication and shall become an integral part of the IM and the auction process.

PTA reserves the right, in its sole discretion, to take any action, including amendment of this IM, which it considers necessary to ensure that the award process is carried out in a fair, open and transparent manner, in accordance with law and in a manner that discourages and strongly penalises any attempted collusion or predatory bidding that may block the entry of potential Applicants into the bidding process or otherwise inhibit an efficient outcome.

PTA reserves the right to add, modify, amend, supplement, cancel, annul or replace any or all of the auction process at any stage without incurring any liability to the affected bidders or any obligations thereunder. PTA further reserves the right to modify or terminate the auction process at any time in its sole discretion and in such an event Pre-Bid Deposit defined in Section 5.3 below, would be returned to the Applicant within thirty (30) working days without bearing any liability, unless the amount is otherwise required to be forfeited, or invite the next bidder to submit the auction winning price thereafter, if deemed appropriate.

This IM and any License or spectrum issued pursuant to the auction process described in the IM shall be exclusively subject to, and interpreted in accordance with, the provisions of the Pakistan Telecommunication (Re-Organization) Act, 1996, and the Rules and Regulations and policies of GOP issued thereunder.

Any dispute, controversy or claim arising out of, or in connection with, this IM, or the breach, termination or invalidity thereof, shall be settled by PTA and its decision shall be final and binding.

The NGMSA process, the accompanying documents, and all correspondence relating to the auction process announced in this IM shall be submitted in English language.

No suit, prosecution or any other legal proceedings shall lie against PTA or any Member or employee or consultant or contractor of PTA in respect of anything done or intended to be done by PTA in good faith in connection with this IM.

### **5.2 Conditions of participation in the award process**

#### **COMPANY REGISTRATION**

Each Applicant must be a company registered with SECP in Pakistan.

#### **OWNERSHIP DISCLOSURE REQUIREMENTS**

All Applicants must disclose their complete ownership information with details of shareholding on the Application Form.

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### **CHANGES IN COMPOSITION OF APPLICANTS**

No change in the composition of an Applicant is allowed following submission of the Application Form and at least up to the date that the License is awarded.

### **COLLUSION**

All Applicants are warned not to indulge in collusion. In case there is any evidence of collusion, PTA reserves the right to disqualify that Applicant from the Auction process. If PTA confirms evidence of collusive bidding before or during the auction, PTA has the right to cancel the auction and for all colluding Applicants to forfeit their Pre-Bid Deposits; and claim damages from them.

### **CONFIDENTIAL INFORMATION**

Confidential Information means any information which, if known to other Applicants, would be likely to affect the price that other Applicants would be prepared to bid in the Auction. Such information would include, but not necessarily be limited to, the Applicant's business case, auction strategy and the highest price it is willing to bid for the License/Spectrum. Any party to whom Confidential Information in relation to an Applicant is disclosed is deemed to be an "Insider" in relation to that Applicant. Applicants and Insiders must not convey Confidential Information to any other Applicant or Insider. In case of such evidence, PTA reserves the right to exclude these Applicants from the bidding process and to retain their Pre-bid Deposits. PTA also reserves the right to exclude the party from further participation in the Auction.

### **DISQUALIFICATION**

Without prejudice to any other remedy that may be available to it, PTA reserves the right to disqualify any Applicant and forfeit its pre-bid deposit for any of the reasons set out below:

- If a Successful Applicant abandons the bid or fails to pay 50% of the Initial License/Spectrum Fee within thirty (30) working days.
- Inaccuracy or misrepresentation of any facts in any part of the Application Form.
- Illegal conduct, disruption during the auction, or indulgence in improper attempts to influence the outcome, or delay the process, or collusion.
- Any "corrupt practice" meaning undue influence, personating, aiding, abetting, counselling or the offering, giving, receiving or soliciting of anything of value to influence a public official in relation to auction process.
- Any fraudulent practice or misrepresentation of facts in order to influence the results of the auction process established by the IM.

In the event of an Applicant being disqualified from the process, PTA reserves the right to impose a penalty on the Applicant which will result in forfeiture of its full Pre-Bid Deposit and damages.

## **5.3 Payment terms**

### **PRE-BID DEPOSIT**

Each applicant shall submit a Pre-Bid Deposit defined as 15% of the Base Prices for the quantity of spectrum detailed in the Sealed-bid Offer in US Dollars along with the application.

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If the payment of Pre-Bid Deposit to PTA is being remitted from abroad, it should be remitted through SWIFT Telegraphic Transfer in PTA's collection account number NIDA-11-1 being maintained at National Bank of Pakistan, Jinnah Avenue Branch Code 1628, Blue Area, Islamabad, Pakistan (Swift code NBPAPKKA02I Routing No. 026004721 of National Bank of Pakistan, New York favouring NBP Head Office Karachi A/C No. 005640-4607) under intimation to PTA and reference "NGMSA". If the payment of Pre-Bid Deposit is being made from sources in Pakistan, it should be made only through a Pay Order or Demand Draft or by way of credit in PTA's Collection Account No. NIDA-11-1, under intimation to PTA and reference "NGMSA". The payment of Pre-Bid Deposit to PTA should be credited in PTA's bank account by the date indicated in Section 1.5 of this IM.

PTA after verification of Pre-Bid Deposit will inform the Applicants of the acceptance of the same but not more than five (5) working days after the closing date for submission of Application Forms.

The Pre-Bid Deposit of a successful Applicant(s) will be adjusted towards the Auction Winning Price (Initial Spectrum Fee), while the Pre-Bid Deposit of the unsuccessful Applicants will be returned, on request, within thirty (30) working days of the Auction Date without bearing any liability towards interest, indexation, inflation or deflation.

Note: Any delays in transfer of funds should be taken up by the Applicants and enough time should be allowed to ensure that all amounts are received in PTA's bank account by the given deadline.

### **FINAL PAYMENTS**

The winners of the auction may opt for 100% payment of the above mentioned Initial Spectrum Fee in Paragraph 4.1.1 of the NGMSA License (Appendix F) as a one-time upfront amount within 30 days of the Auction. OR Minimum 50% payment of the above mentioned Initial Spectrum Fee in Paragraph 4.1.1 of the NGMSA License within 30 days of the Auction and the remaining 50% of the Initial Spectrum Fee in USD in 5 equal annual instalments with cumulative mark up rate at the rate of one year LIBOR rate + 3% for the period from the Effective Date of the License to the payment date. All payments shall be made in US Dollars. Bank guarantee would be required for the amount to be paid in instalments.

If any of the winning Applicants fail to make the payments as referred above within the stipulated time, PTA may at its discretion offer the spectrum to the Applicant having submitted the next highest bid for that spectrum and on the same terms and conditions subject to submission of written undertaking and Deposit of their auction winning price. The defaulting Successful Applicant shall forfeit the Pre-Bid Deposit and all other amounts paid to that date to PTA and any binding penalties that may be imposed by PTA.

## **5.4 Bank guarantees and bonds**

### **INITIAL SPECTRUM FEE**

As a continuing guarantee for payment of Initial Spectrum Fee, where a winner does not opt for 100% upfront payment the Licensee shall deliver to the Authority an unconditional, irrevocable and continuing Bank Guarantee on the format acceptable to the Authority, issued by a AAA-rated Bank in Pakistan, for the amount of US\$ equal to the remaining 50% of the Auction Winning Price. If the payment of any instalment of Initial Spectrum Fee is not made by the Licensee by the due date, the Authority shall have the right to encash the Bank Guarantee at any time, to the extent of the amount unpaid by the Licensee. In the event of encashment

## PTA – Next Generation Mobile Services Award (NGMSA)

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of the Bank Guarantee by the Authority, the Licensee shall be obliged to submit a fresh Bank Guarantee for the remaining amount of Initial Spectrum Fee within one month of the encashment of the old Bank Guarantee.

### ANNUAL REGULATORY DUES

As a continuing guarantee for payment of annual fees, charges and contributions, the Licensee shall deliver to the Authority an unconditional, irrevocable and continuing Bank Guarantee, on a format acceptable to the Authority, from a AAA rated bank, for the amount of US\$10,000,000 (US Dollars Ten Million only) prior to the Effective Date. If payment of any fee, charge and contribution is not made by the Licensee by the due date, the Authority shall have the right to encash the Bank Guarantee at any time, to the extent of the amount unpaid by the Licensee. In the event of encashment of the Bank Guarantee by the Authority, the Licensee shall be obliged to submit a revised Bank Guarantee of US\$10,000,000 (US Dollars Ten Million only) within one month of the encashment of the old Bank Guarantee.

### PERFORMANCE BONDS

As a guarantee for the performance of Licensee’s network rollout obligations in Section 2.3, the Licensee shall deliver to the Authority unconditional, irrevocable and continuing Performance Bonds as detailed in Table 10 in the shape of Bank Guarantees from an AAA rating bank, on a format acceptable to the Authority in respect of its 2100 MHz, 1800 MHz and 850 MHz coverage commitments.

**Table 10: Description of Performance Bonds**

Spectrum Band	Performance Bond
2100 MHz	USD 15 Million
1800 MHz	USD 15 Million
850 MHz	USD 15 Million

In case any phased roll-out obligation is not fulfilled, the Performance Bond proportionate to the roll-out obligation not met shall be encashed by the Authority.

### 6 Application instructions

An Applicant must fill out the Application Form in Annex B and must submit all the required supporting company documentation and a Pre-Bid Deposit. As part of its Application Form, an Applicant must declare clearly the number of spectrum segments it is willing to buy at the base prices of the auction. This declaration will be binding and the Applicant must bid for the same amount of spectrum in each band during the first round of the auction. After submission, the application will not be modified. However, PTA reserves the right to request additional information and/or clarification from an Applicant.

The Applicant shall bear all its costs associated with the preparation and submission of its Bid and PTA shall in no case be responsible for these or any other costs, regardless of the conduct or outcome of the application process.

PTA reserves the right to accept or reject all or any application or bid without assigning any reason and incurring any liability whatsoever. However, in case of rejection of application pre-bid deposit will be returned within 30 days unless the amount is otherwise required to be forfeited.

Applicants may raise questions and queries in writing through letter (courier), fax or email to PTA concerning this IM, by the date mentioned in Section 1.5, following the date of publication of this IM. PTA may not respond to questions and queries received after end date of submission of queries as given in Section 1.5. Furthermore PTA reserves the right not to reply to questions. However, to the extent that it does, it will publish and reply to the question in writing or at PTA website without disclosing the name of the applicant.

PTA will notify the Qualified Applicants by courier or letter or fax or e-mail as per the timeline mentioned in Section 1.5 that the Applicant is entitled to participate in the bidding process. Any of the above will be considered sufficient for the purpose of notice.

#### Contact details for questions

All deliveries, notices or other communications made to Applicants in connection with the Application process shall be sent by designated fax or email or letter (courier) to the contact office of the Applicant(s) /Applicant(s), as specified by the Applicant to PTA in his Application Form.

All correspondence relating to this IM, Investors' Conference, submission of Application documents, Auction procedure and issuance of License should be duly marked "NGMSA" and addressed to:

Director General (Licensing)  
Pakistan Telecommunication Authority  
H/Qs F-5/1, Islamabad 44,000  
Pakistan  
Phone: (+92 51) 287.8128  
Fax: (+92 51) 287.8129  
E-mail: [ngmsa@pta.gov.pk](mailto:ngmsa@pta.gov.pk)

PTA will review and consider comments/correspondence on this IM submitted by the date given in Section 1.5 of the IM.

PTA may also conduct an information session for prospective Applicants to explain the auction process, rules, and respond to all Applicant questions and concerns. This information session will take place after the final IM



## **PTA – Next Generation Mobile Services Award (NGMSA)**

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is published and its only purpose will be to clarify any questions that prospective Applicants may have about the application process and auction itself.

## PTA – Next Generation Mobile Services Award (NGMSA)

### 7 Definition of terms

Terms used in this document shall have the meanings defined in Table 2.

**Table 2: Definition of terms**

Term	Definition
1800 MHz Band	Spectrum in the range 1710-1785 MHz paired with 1805-1880 MHz for NGM Services
2100 MHz Band / 2.1 GHz Band	Spectrum in the range 1920-1980 MHz paired with 2110-2170 MHz for NGM Services
3GPP	3 <sup>rd</sup> Generation Partnership Project – responsible for development of GSM, EDGE, UMTS and LTE standards
3GPP2	3 <sup>rd</sup> Generation Partnership Project 2 – responsible for development of the CDMA family of standards
850 MHz Band	Spectrum in the range 824-849 paired with 869-894 MHz
ANSI	American National Standards Institute
Applicant (Bidder)	A company that completes and submits the Application Form for the NGMSA
Auction Winning Price	The last bid placed by a standing high bidder at the close of the auction.
Base Prices	The prices for spectrum upon which Sealed-bid Offers must be based and the prices of lots in the first round of the SMRA auction
Bidder	A qualified Applicant
Starting Price	Same as Base Price
Cellular Mobile License	The License governing the rights and obligations of use of spectrum defined in the License.
Cellular Mobile Operator	A mobile operator in Pakistan currently holding spectrum in the 900 MHz or 1800 MHz bands.
District	An administrative division in Pakistan
Draft Cellular Mobile License	The draft of the Cellular Mobile License to which will be added licensee details and an Annex to describe the spectrum for which rights are licensed.
EDGE	Enhanced Data rates for GSM Evolution
ETSI	European Telecommunications Standards Institute
FAB	Frequency Allocation Board of Pakistan.
FDD	Frequency Division Duplex. A method of duplexing that uses one frequency range for base station to mobile communications and another for mobile to base station.
Fixed Services	The provision of telecommunications services by means of a fixed connection or a wireless system providing public fixed network connections to consumers.
GoP	Government of Pakistan
GPRS	General Packet Radio Services, as defined by ETSI
GSM	Global Systems for Mobile communications
IEC	International Electro technical Committee
IMT	International Mobile Telecommunications. A term used by the ITU to describe the collection of approved standards used for delivery of mobile services.
Initial Spectrum Fee	The payment due for the License as detailed in Paragraph 4.1.1 of the NGMSA License.
ITU	International Telecommunications Union
LIBOR	London Inter-Bank Offered Rate
License	The License awarded to a Cellular Mobile Operator or Market Entrant in the NGMSA
License Effective Date	The date of issuance of the License
Licensee	Holder of a License awarded in the NGMSA
Lot	A quantity of spectrum which is auctioned as a non-divisible unit

## PTA – Next Generation Mobile Services Award (NGMSA)

Term	Definition
LTE	Long-Term Evolution
Market entrant / New Entrant	A mobile operator in Pakistan not currently holding spectrum in the 900 MHz or 1800 MHz bands, that obtains a License in the NGMSA.
MHz	Megahertz
MOITT	Ministry of Information Technology & Telecom
NGMSA	Next Generation Mobile Services Award. The Award of 850 MHz, 1800 MHz and 2100 MHz spectrum in Pakistan
Operator	A licensed Cellular Mobile Operator in Pakistan or Market Entrant
Qualified Applicant	A Qualified Applicant is an applicant who has been deemed qualified by PTA after assessment of its application to participate in the NGMSA and payment of the correct pre-bid deposit.
Pakistan Table of Frequency Allocations	A document published on the FAB website that defines the allocation policy of Pakistan for each frequency band
Potential Market Entrant	A participant in the NGMSA that is not currently a PTA licensed Cellular Mobile Operator.
PTA	Pakistan Telecommunication Authority
RAB	Radio Access Bearer
Segment	A unit of spectrum comprising 2x10 MHz in the 1800 MHz band or 2x5 MHz in the 2100 MHz band
UMTS	Universal Mobile Telecommunications System
US\$ (USD)	US Dollars
WLL	Wireless Local Loop. A wireless system providing public fixed network connections to consumers.

## **8 Annexes**

Annex A – Pakistan’s telecommunication sector

Annex B – Application Form to become a “Qualified Applicant” to participate in the NGMSA

Annex C – Company resolution

Annex D – Power of Attorney

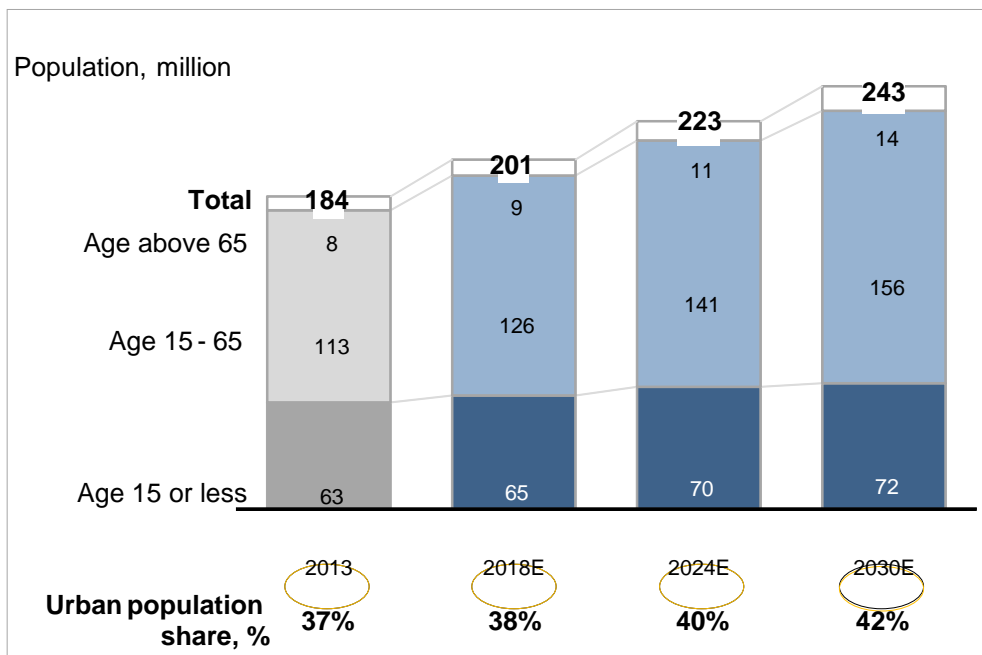
Annex E – Sealed-bid Offer

Annex F – License Template

## **Annex A – Pakistan’s Telecommunication Sector**

### **1. ECONOMY OF PAKISTAN**

1.1 Pakistan has the **6th** largest population in the world, making it an attractive market for investors around the globe. Its population is rising at a steady level, and has more than doubled since 1980. According to different global sources, the country is expected to grow at ~2% per annum and to reach more than **240 million** inhabitants by 2030.



Source: IMF, CIA, World Bank, Pakistan’s Ministry of Finance

**Figure 2: Pakistan population evolution forecast**

1.2 The population in the country is young and becoming more educated day by day. The urbanization trend is expected to continue and weight of urban population is expected to reach ~**42%** by 2030;

1.2 Pakistan is a democratic country consisting of two houses of the Parliament, the National Assembly and the Senate. The head of the State is the President, and the head of the Government is the Prime Minister;

1.3 Pakistan has extraordinarily important strategic endowments and great development potential. Pakistan occupies a strategic location at the crossroads of South Asia, Central Asia, China and the Middle East. It is at the fulcrum of a huge market with a vast population, enormous and diverse resources and huge untapped potential for trade and a huge potential source of demand and growth;

1.4 Approximately 37% of Pakistani population resides in urban areas. The largest urban centers are Karachi (estimated population of 23 million), Lahore (estimated population of 13 million) Faisalabad (estimated

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population of 5.8 million) and Rawalpindi/ Islamabad (estimated population of 6.2 million). The Country has four provinces Punjab, Sindh, Khyber Pakhtunkhwa (KPK) and Baluchistan having provincial capitals Lahore, Karachi, Peshawar and Quetta respectively. The Federal Capital is Islamabad;

1.5 The current per capita income (PPP) of Pakistan is approximately US\$ 2,741;

1.6 Pakistan's economy grew at 4.8% on average per annum during the last decade. In the year 2012-13, the economy registered growth of about 3.6%. Services sector has 58% share in GDP and its contribution in GDP grew by 3.7% in the year 2012-13. Due to liberal trade regime, Pakistan's annual international trade has reached US\$ 65 billion in the year 2012-13. Remittances of overseas Pakistanis provide a substantial support to the balance of payment requirements and during the year 2012-13 foreign remittances were registered over US\$ 14 billion;

1.7 Foreign Direct Investment in Pakistan during last nine years was US\$ 25.5 billion (23% of the total FDI was in telecom sector). Historically, the United States, United Kingdom, United Arab Emirates and Saudi Arabia have been Pakistan's major sources of FDI investment. Principal sectors attracting such investment are financial services, oil and gas exploration, power, trade, transport, storage and communications, chemicals, pharmaceuticals, fertilizers, and textiles;

1.8 Financial reforms introduced in 1990s have liberalized Pakistan's banking sector. Private Banks are playing a more significant role and Pakistan's financial system has shown reasonable growth in recent years. Currently, there are 10,250 commercial bank branches and assets of all banks are over Rs 7 trillion.<sup>7</sup> The mobile banking sector has also shown a remarkable growth during the last three years and four out of five cellular mobile operators currently operating in Pakistan have launched their mobile banking networks in partnership with financial institutions. The network of over 95,000 mobile banking agents provides a perspective to take financial services to the un-served and poor;

1.9 Additional information on the state of the economy in Pakistan is available in Pakistan Economic Survey 2012-13 published by the Ministry of Finance. The Survey is available at the website of the Ministry of Finance: <http://www.finance.gov.pk>;

1.10 Pakistan has negotiated Bilateral Investment Treaties with several countries, including the Peoples Republic of China, France, Germany, the United Kingdom, the Republic of Korea, the Netherlands, Romania, Sweden, Spain, Portugal, Kazakhstan, Turkmenistan, Tajikistan, Kyrgyzstan, Uzbekistan, Switzerland, Azerbaijan, Bangladesh, the United Arab Emirates, Iran, Indonesia, Tunisia, Syria, Belarus, Mauritius, Italy, Oman, Sri Lanka, Australia, Japan, Belgium, Denmark, Czech Republic, Thailand, Philippines, Egypt, Lebanon, Morocco Qatar, Turkey, Kuwait, Malaysia, Laos, Cambodia and Singapore. These treaties generally include dispute settlement provisions;

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<sup>7</sup> As of 22<sup>nd</sup> February 2014, the conversion rate is PKR 104.9 per USD.

## **PTA – Next Generation Mobile Services Award (NGMSA)**

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1.11 Pakistan has bilateral and/or double taxation treaties or agreements with several countries, including Austria, Canada, Germany, Indonesia, Italy, Lebanon, Mauritius, Poland, Switzerland, Turkmenistan, Kazakhstan, the United Arab Emirates, Belgium, China, France, Greece, Iran, Japan, Libya, Saudi Arabia, Romania, Sweden, Belarus, Hungary, Jordan, Kenya, Kuwait, Malaysia, Netherlands, Nigeria, Norway, Oman, Philippines, Qatar, South Africa, Syria, Tunisia, Uzbekistan, the United Kingdom, USA, Bangladesh, Denmark, Finland, India, Ireland, South Korea, Malta, Singapore, Sri Lanka, Thailand and Turkey.

1.12 The Protection of Economic Reforms Act, 1992, safeguards local and foreign investments in Pakistan. This statute, inter-alia, guarantees the right to bring, hold, sell, transfer and take out foreign exchange within or out of Pakistan; protects fiscal incentives provided by the government; and protects investors against expropriation of assets;

1.13 Companies doing business in Pakistan are subject to the Companies Ordinance, 1984, as amended. This statute sets out the legal regime applicable to the incorporation, operation and termination of companies in Pakistan. The Securities & Exchange Commission of Pakistan (SECP) is the administrative entity responsible for registration of companies under Companies Ordinance 1984. Applicants should consult their own professional advisors for further information on company law requirements;

1.14 The Income Tax Ordinance, 2002 is applicable on the companies conducting business in Pakistan. To obtain more information on Pakistan's taxation regime, visit the website of the Federal Board of Revenue: <http://www.fbr.gov.pk>. Applicants should also consult their own professional taxation advisors for complete information on Pakistan's tax requirements;

1.15 Pakistan has one of the most liberal foreign investment regimes in South Asia. One hundred percent foreign equity is permitted in the manufacturing and infrastructure sectors. There is no bar on repatriation of capital gains, dividends, and profits. Ongoing reform of Pakistan's trade regime is reducing tariff barriers. Duty on capital goods, plant and machinery not manufactured locally is now just 5%, having earlier been in a range of 5-25%;

## **2. OVERVIEW OF TELECOM SECTOR IN PAKISTAN**

2.1 The telecom sector in Pakistan has grown rapidly in the past ten years and offers significant opportunities in every segment of the telecom market. The Federal Government has granted high priority to developing telecommunications in the country to achieve sustainable growth in all sectors of the economy. The regulatory framework of Pakistan's telecom sector provides conducive environment for international investment and provision of advanced telecom services. There is intense competition in the cellular mobile segment of Pakistan with some of the world's most successful investors in emerging markets including Orascom (VimpelCom), Telenor, Etisalat and China Mobile. Other segments of the telecom sector including Fixed Local Loop (FLL), Wireless Local Loop (WLL) and Long Distance International (LDI) have also presence of international investors;

## PTA – Next Generation Mobile Services Award (NGMSA)

2.2 Pakistan has international connectivity with other countries through undersea cables, satellite links and terrestrial cables. Pakistan is linked to Southeast Asia, the Middle East and Western Europe by the SEA-ME-WE-III<sup>8</sup> submarine fiber optic cable system. An older submarine cable also links Pakistan with UAE;

2.3 Pakistan has established submarine cable connectivity (SEA-ME-WE-IV) for the international link and improving through IMEWE<sup>9</sup> and SEA-ME-WE-V. In addition, Transworld Associates Ltd. had established Pakistan's first ever private sector undersea fibre optic cable system (Transworld "TW"-1) which connects Pakistan with Oman and UAE. Transworld is a joint venture between Orascom Telecom of Egypt, the Saif Group of Pakistan and the Omzaest Group of Oman and is planning to lay another submarine cable in near future. PTCL, in collaboration with a consortium of leading international telecom operators, is also planning to build a new sub-marine system named Asia Africa Europe (AAE-1). With the start of above international links, Pakistan has now established sufficient backbone for international connectivity. The country is also in process of connecting with Iran, India, Afghanistan and China through terrestrial optical fibre for improving the redundant connectivity and providing the hub for international connectivity to central Asian states;

2.4 In addition to the international connectivity Optical Fibre connectivity inside the Country have also improved over the years connecting most of the cities and town all across the country. Many companies have established optical fibre networks accumulating to a total 22,300 km of fibre network. The following table summarizes the domestic optical fiber network:

Table 1 Fiber Optical Back Haul		
1	PTCL	5,500 Km
2	Wateen	5,500 Km
3	Multinet	4,500 Km
4	Link Direct	6,800 Km
Total		22,300 Km

2.5 To promote development of affordable telecommunication facilities in unserved areas of Pakistan Universal Service Fund (USF) have been working successfully over the past years since its establishment in

<sup>8</sup> SEA-ME-WE: The Southeast Asia, the Middle East and Western Europe (SEA-ME-WE) is a submarine cable system linking South East Asia to Europe via the Indian sub-continent and Middle East.

<sup>9</sup> IMEWE: India-Middle East – Western Europe (IMEWE) is a submarine cable system which links Indian sub-continent and Europe via Middle East.



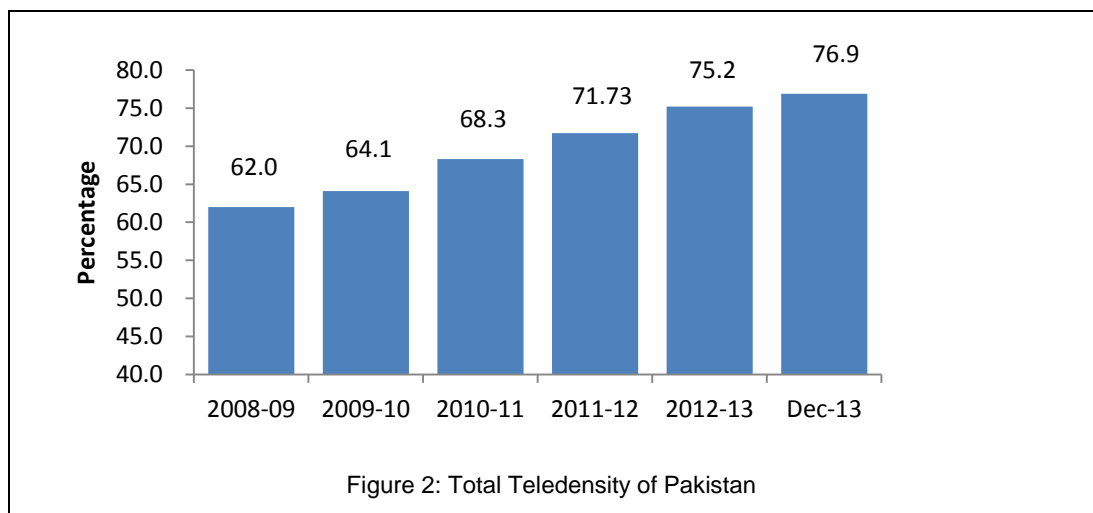
## PTA – Next Generation Mobile Services Award (NGMSA)

2006. So far a total of 4258 kms of optical fiber has been laid by the help of USF in un-served areas while 2445 kms is in progress. Most of the *tehsil* headquarters of the country are not connected with optical fiber.

2.6 The telecommunication sector in Pakistan has shown significant growth in the recent years, however, it still lags behind many of its comparable economies in terms of fixed line density (number of fixed phones per 100 inhabitants), mobile penetration (number of mobile subscribers per 100 inhabitants) and internet usage. Due to the fact that there is a substantial population that is devoid of telecommunication services, there exists an enormous potential for growth of telecommunications in the country;

2.7. Tele-centers are also being rolled out in all the provinces of the country.

2.8 The graph below shows Pakistan's total teledensity over the last few years:



### 3. CELLULAR MOBILE SERVICES SECTOR IN PAKISTAN:

3.1 The mobile subscriber base in Pakistan has evolved at a fast pace reaching a sizable market of around US\$ 3.2 billion by 2013.

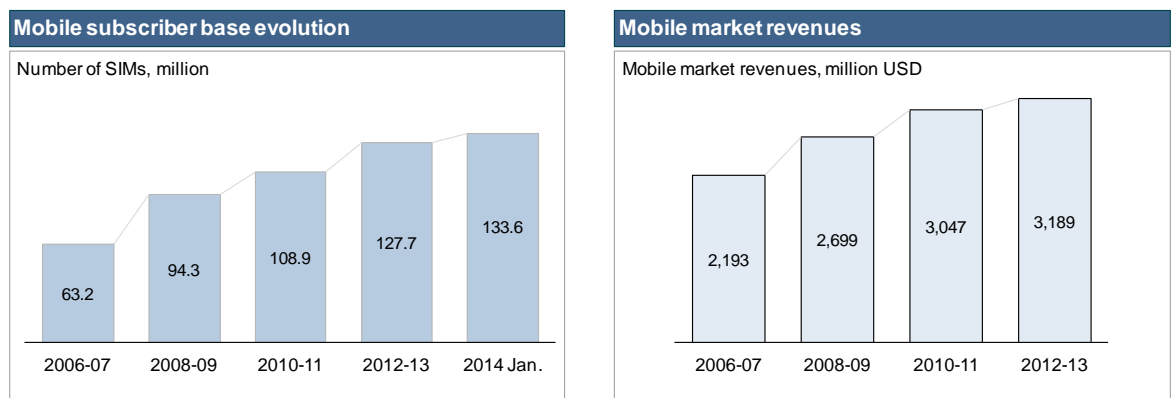


Figure 3: Cellular Mobile market outlook

## PTA – Next Generation Mobile Services Award (NGMSA)

3.2 There are 5 mobile operators in Pakistan. Mobilink is the market leader followed by Telenor, Ufone, Zong and Warid.

Market shares, 2012–13 fiscal year, %

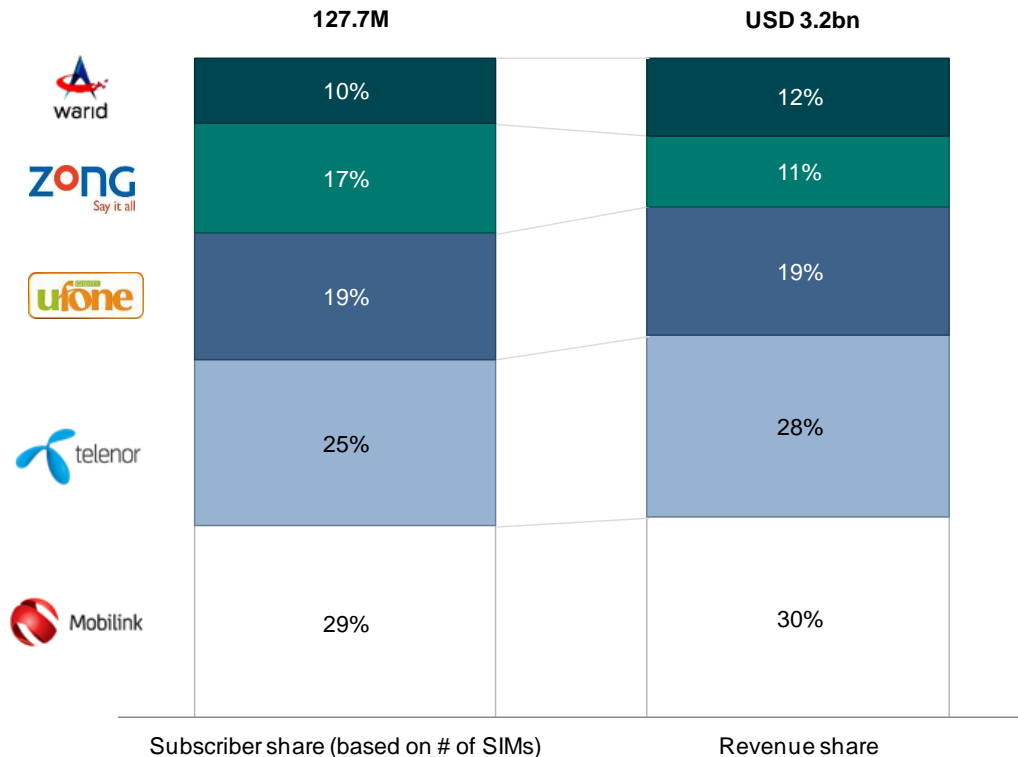


Figure 4 - Market shares of mobile operators

3.3 National population coverage of the cellular mobile network is ~75% in Pakistan and has been expanding with investments of mobile operators.

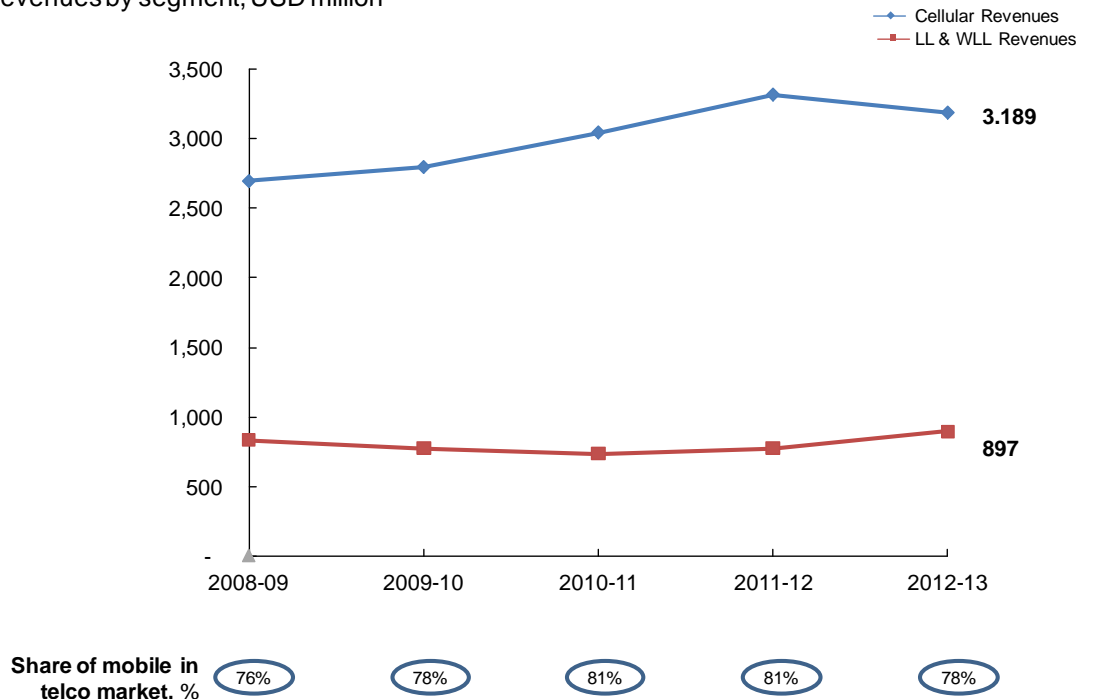
3.4 Today, cellular mobile segment represents **78%** of total Pakistani telco market revenues, and it is expected to further increase its share in the medium term with the introduction of NGN services.

3.5 Fixed telco market is limited in terms of geography and this represents an important potential for mobile broadband in the market.

3.6 There are ~134 million active SIM's in Pakistan by Jan 2014, which corresponds to a mobile market penetration ~74%. The penetration is expected to increase at an increasing pace in the close future.

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Total revenues by segment, USD million



Source: PTA

Figure 5: Telecommunication sector revenues

3.7 The market is expected to reach 150-160 million subscribers (SIM's) by 2017 according to third party research providers.

3.8 Market is mainly prepaid oriented (~98%), and pay per minute tariff structure is dominant. The post-paid share in the market can be expected to increase as the market reaches maturity in the medium term future.

3.9 Data / VAS potential is unexploited with ~10% share in total revenues (among mobile operators). It can be expected to increase its share with hype especially among smartphone and mobile broadband users with the introduction of NGN services. Data revenues and value added services (e.g. mobile TV) on handset terminals will also trigger the non-voice revenue growth in mobile market in near future.

3.10 The following graph shows the GDP PPP normalized and nominal ARPU's of Pakistan mobile market and other countries in the region.

## PTA – Next Generation Mobile Services Award (NGMSA)

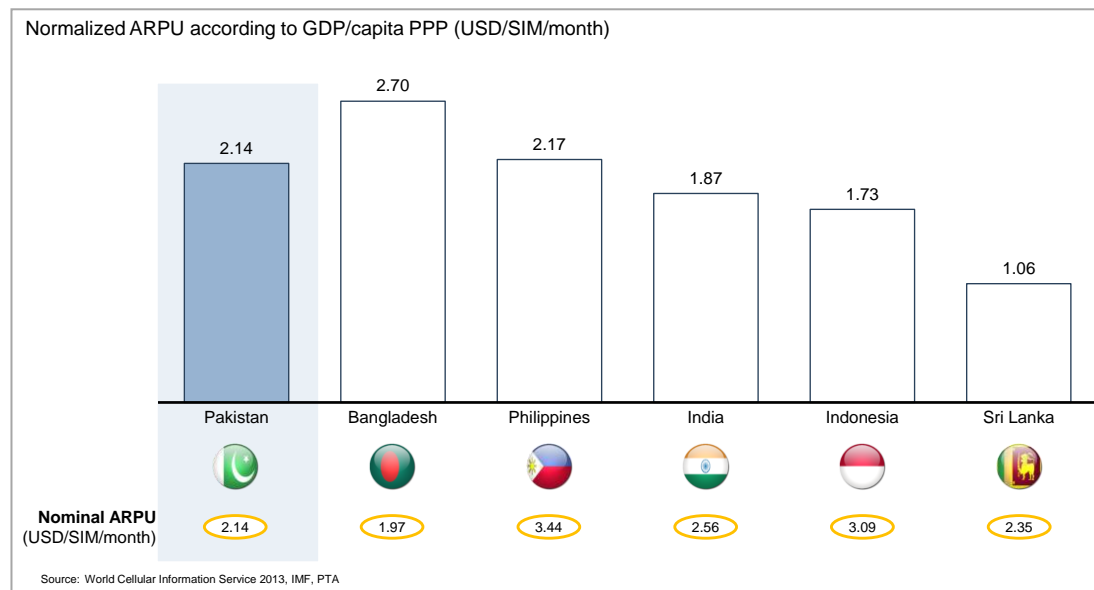


Figure 6: ARPU of benchmark countries, 2013 USD/SIM/month

3.11 Smartphone penetration is ~15% (according to number of voice SIM's) and budget brands are increasing their penetration in the market. The increase in the smart phone share is expected to trigger adoption of NGN services. Total number of smart phones in the market is expected to more than double in the next 4 years reaching ~45 million terminal base in the market according to third party research providers (estimated to be ~21 million in 2013).

## 4. CELLULAR MOBILE SERVICES PROVIDER PROFILES

The following paragraphs give brief description of the five existing Mobile Cellular Operators:

### 4.1 Pakistan Mobile Communication Limited -PMCL (MOBILINK)

4.1.1 PMCL (Mobilink) launched its GSM network in 1994. In June 2003, the company became the largest mobile operator in Pakistan. The company has cell sites covering over 10,000 cities, towns and villages. PMCL operates under the consumer brand 'Mobilink'.

### 4.2 Telenor

4.2.1 Telenor acquired the License for providing GSM services in Pakistan in April 2004, and launched its services commercially in Islamabad, Rawalpindi and Karachi on March 15, 2005. The License terms stipulate that by year 4 Telenor would cover 70% of Pakistan's 297 administrative Tehsil headquarters. Telenor fulfilled the license requirements and provide superior quality coverage.

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### **4.3 Pakistan Telecom Mobile Limited - PTML (UFONE)**

4.3.1 PTML (Ufone) is Pakistan's fourth mobile operator and second GSM operator. It launched services in January 2001 under the Ufone brand. PTML is a wholly owned subsidiary of PTCL controlled by Eitislam. Ufone is dubbed as one of the most innovative operators in the market offering innovative value added services to its consumers.

### **4.4 CMPak Limited (ZONG)**

4.4.1 CMPak Limited, previously known as Paktel was founded in 1990 and claims coverage, network quality, customer services and value added services. It presently offers cellular services all across the country. CMPak operates under the brand name of Zong, and is owned and controlled by China Mobile the biggest cellular mobile operator in China.

### **4.5 Warid Telecom**

4.5.1 Warid Telecom entered along with Telenor in Pakistan's telecom sector and is being backed by the Abu Dhabi Group, one of the largest groups in the Middle East. Warid Telecom launched its services in May 2005 in 28 cities across Pakistan in the 1st phase. Warid Telecom has mainly targeted the population residing in urban areas of the country offering superior quality services in these areas.

## **5. LOCAL LOOP SERVICES**

5.1 Pakistan has been divided into 14 Telecom regions. A Local Loop operator has to operate within the telecom regions for which the license is awarded. Local Loop operators include both fixed line and wireless operators and are operating all over the country. So far there are 17 Fixed Local Loop operators who are operating in different areas of the country along with 13 Wireless Local Loop operators in all 14 telecom regions.

5.2 At the end of December 2013, local loop subscriber's base was 5.9 Million which included both fixed and wireless local loop operators. The figure below shows the growth trend and comparison between fixed and wireless local loop subscriber base.

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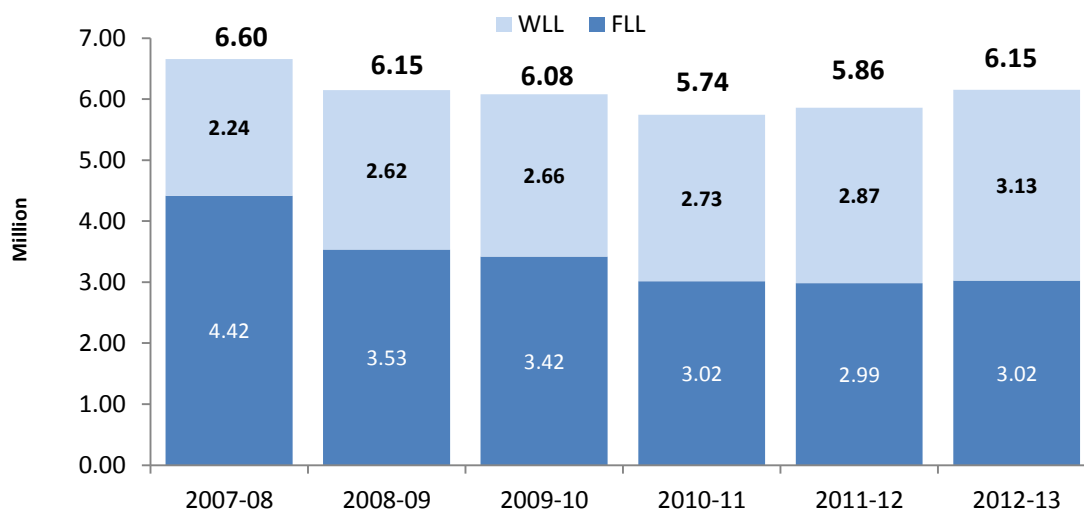


Figure 7: FLL and WLL Subscribers

### 6. LONG DISTANCE AND INTERNATIONAL SERVICES

6.1 Long distance and international services segment is an integral part of the telecom sector which are responsible for carrying international traffic from Pakistan to abroad and terminating international traffic in Pakistan. At the time of de-regulation in 2004 a total of 14 LDI Licenses were awarded to various companies, besides PTCL, the incumbent operator. Major players include Link Direct, Wateen, WorldCall and Telegard. Almost all of the LDI operators are providing LDI service using NGN networks.

### 7. CLASS VALUE ADDED SERVICES

7.1 Class value added service licensing started in 2005-06 which comprises three broad categories for licensing. i.e. CVAS Data, CVAS Voice and CVAS Registration for provision of different services such as Vehicle Tracking System, Payphone Services, Premium Rate Services, Video Conferencing etc. So far a total of 507 Licenses have been issued to various companies which are operating in different areas across Pakistan.

### 8. INTERNET AND BROADBAND SERVICES

8.1 In line with the Federal Government policy of expanding Internet access throughout the country, there is direct digital Internet connectivity in more than 2,389 cities and towns. Customers are able to access internet through legacy dial-up connections as well as DSL services in both fixed and wireless media;

8.2 To promote broadband Internet services in Pakistan, PTA directed PTCL to enter into agreements with ISPs for the provision of Digital Subscriber Line (DSL) services under certain conditions. Currently there are many major players providing broadband facilities in the country both fixed and wireless including PTCL, WorldCall, Telegard, Wi-tribe, Link Dot Net, Sharp, NayaTel and Wateen;

8.3 Pakistan's Broadband market depicts a substantial growth potential as so far the broadband penetration rate is quite low i.e. only 1.5%. During the last seven years, broadband subscribers have shown

## PTA – Next Generation Mobile Services Award (NGMSA)

an average annual growth of over 100%. According to “Point Topics Global Broadband Report for the 4<sup>th</sup> Quarter 2009” Pakistan stands among the top 10 countries for annual broadband subscription growth;

8.4 The below figure shows the positive growth trend in the broadband subscribers' base of Pakistan:

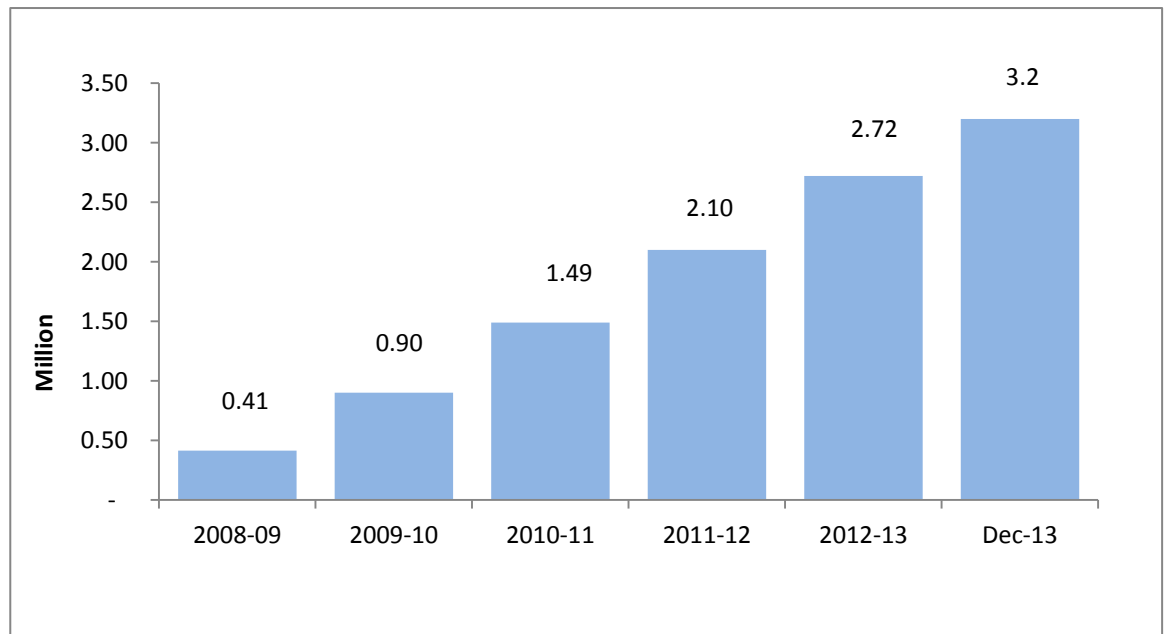


Figure 8: Broadband Subscribers Growth

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### Annex B – Application Form

#### APPLICATION FORM TO BECOME A “QUALIFIED APPLICANT” TO PARTICIPATE IN THE NGMSA

##### APPLICATION SUBMISSION INSTRUCTIONS:

The Application Form must be in English language and one (1) original signed by the Applicant’s authorized representative plus (2) two copies must be submitted to the following address of PTA by 4 pm Pakistan Standard Time as per the timeline in Section 1.5 to:

Director General (Licensing)  
Pakistan Telecommunication Authority  
H/Qs F-5/1, Islamabad 44,000  
Pakistan  
Phone: (+92 51) 287.8128  
Fax: (+92 51) 287.8129  
Email: ngmsa@pta.gov.pk

Applications shall be submitted in sealed envelopes and the envelopes shall make clear: Applicant’s name, reference to “Application for NGMSA”,

##### INFORMATION AND SUPPORTING DOCUMENTATION TO BE PROVIDED:

The following documents are part of the Application Form and must be provided in support of the application:

\*Please check mark with yes if provided or explain why a document is not provided. Please provide a cover letter along with each requested document including title and number of pages.

	Provided (yes/no)	If no, please explain
1. APPLICANT INFORMATION		
a. The name of the Applicant (company name)		
b. The name, title, capacity and signature of at least one person legally authorized to fully represent the candidate by virtue of the law.		
c. Certificate of Incorporation/registration		
d. Memorandum and Articles of Association		



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e. List of Directors with details of their shareholdings, and relation to other Operators and applicants for a License		
f. Shareholders with details of their shareholdings		
g. Ownership. A clear, comprehensive and detailed view of the candidate's ownership structure.		
h. List of Shareholder Affiliates that are Operators or applicants for a License, and description of relation to Applicant		
i. National Identity Card (for Pakistan National)/ Passport (for foreign nationals) and other antecedents like contact details of the Directors and authorized representatives of the company		
2. Proof or a statement on word of honour by the Applicant:		
a. That the Company or its Directors have never been declared insolvent by a court of law or government organization.		
b. That the Directors of the company have never been convicted by a court of law for major offences or unethical/ immoral turpitude (other than minor offences)		
c. That neither the applicant Company nor its group/consortium members are defaulter(s) of PTA and to other PTA licensees/transactions.		
3. National Income Tax Number		
4. Certificate on original letterhead from the Group /Joint venture/Consortium members that they are the authorized participants for NGMSA in Pakistan through the Applicant. (Annex B)		
5. Resolution of the Board of Directors of the Applicant authorizing: I. the person who submits and signs the Application II. legally authorized to fully represent the candidate by virtue of the law		
6. Special Power of Attorney granted to the person who submits and signs the Letter of Application		
7. Company Resolution Format (Annex C)		
8. Authorized Contact Representatives nominated and duly authorized by the Applicant		
9. Brief Description of Telecommunications Qualifications and Experience of the Applicant, its key management personnel and its shareholders		
10. Capital Cost of service/ project for the first year and the sources of finance in the form of equity and long term debt.		
11. Source of funds in the form of equity and debt for auction winning price.		

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12. Brief Description of the project and forecast balance sheets and profit loss accounts/ income statements and cash flow statements for the first 5 years of operation.		
13. Brief description of committed financial resources to meet Capex of the project for the 1st year in the form of bank statement of the company's account duly signed and stamped by bank manager, confirmed commitments, letter of intent, MOU signed by the bank and CFO/ Authorized officer of the company for any long term debt.		
14. Technical Plan		
15. Bank account details for any reimbursement after the auction		
16. Annex D – Power of Attorney		
17. Annex E – Sealed-bid Offer		
<b>18. Pre-Bid Deposit paid to PTA with:</b>  Pay order-demand draft number: _____ Dated: _____ OR SWIFT code number: _____ Dated: _____ OR Direct deposit Receipt Number: _____ Dated: _____  supporting to total amount of segments you are interested in buying indicated in Annex E.		

### AUTHORIZED CONTACT REPRESENTATIVES

Name one (1) Principal Authorized Contact Representative and a Backup Authorized Contact Representative, together the Authorized Contact Representatives, for purposes of receiving all auction-related documentation and for communications with PTA on matters relating to the Spectrum allocation process.

Please note that an Authorized Contact Representative must be available for all matters related to the licensing process and this is the person who will receive all official communications and confidential information. These Representatives will be the only people allowed to submit official communications to the PTA during the process.

The Authorized Contact Representatives must be duly authorized by the Applicant's Board of Directors.

As part of the Application, provide contact details as follows:

#### PRINCIPAL AUTHORIZED CONTACT REPRESENTATIVE

[FIRST, LAST NAME]  
 PHYSICAL ADDRESS  
 LANDLINE TELEPHONE  
 CELL PHONE NUMBER

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FAX NUMBER

EMAIL ADDRESS

### BACKUP AUTHORIZED CONTACT REPRESENTATIVE

[FIRST, LAST NAME]

PHYSICAL ADDRESS

LANDLINE TELEPHONE

CELL PHONE NUMBER

FAX NUMBER

EMAIL ADDRESS

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### Annex C – Company Resolution

**[Letterhead of the Company]**

I, \_\_\_\_\_, Company Secretary of [HERE GIVE FULL NAME AND ADDRESS OF THE APPLICANT ENTITY] (the "Company"), do hereby certify that the following is a true and correct copy of a Resolution duly adopted at a meeting of the Board of Directors of the Company duly convened and held on \_\_\_\_\_, and at this resolution has not been modified, rescinded or revoked, and is at present in full force and effect:

RESOLVED THAT the Company be and is hereby authorized to apply for the award of [here describe the nature of the Spectrum being applied for], ("the Spectrum") and to comply with all requirements of its application process and the terms of the License, if any, granted as a consequence;

FURTHER RESOLVED THAT Mr. \_\_\_\_\_, son of Mr. \_\_\_\_\_, bearing CNIC/Passport No \_\_\_\_\_ resident of \_\_\_\_\_ [here give designation of the appointee] be and is hereby appointed as an authorized representative of the Company (the "Authorized Representative"), for and on its behalf, to execute all documents and take all actions as may be required, necessary or incidental in connection with submission and grant of the application of the License, including submission of the Power of Attorney in the form and manner prescribed at Annex D of the Information Memorandum issued by the Pakistan Telecommunication Authority for which all necessary instructions and information has been provided to him;

FURTHER RESOLVED THAT Mr \_\_\_\_\_, son of Mr. \_\_\_\_\_, bearing CNIC/Passport No \_\_\_\_\_, director/secretary of the Company be and is hereby authorized on behalf of the Company to execute a Power of Attorney in favour of the Authorized Representative on such terms as may be deemed expedient and in the form prescribed by the Pakistan Telecommunication Authority.

Certified to be a true copy:

**Company Secretary**

**Company Seal and  
Stamp**

## PTA – Next Generation Mobile Services Award (NGMSA)

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### Annex D – Power of Attorney

#### POWER OF ATTORNEY

[To be submitted on a stamp paper of Rs.100, or US \$\_\_\_\_\_ in case of foreign applicants]

KNOW ALL MEN BY THESE PRESENTS THAT WE \_\_\_\_\_, (“Company Name”)

having our registered office at \_\_\_\_\_ (hereinafter called the "Applicant") do hereby nominate, constitute and appoint [*here give name, parentage and address of the Special Attorney*] to be and to act as our lawful attorney, for us, in our name and on our behalf to exercise any and all of the powers herein contained, that is to say:

1. to sign, execute or authenticate all applications or other documents required to be submitted to Pakistan Telecommunication Authority (herein after the "Authority") and to act for and on our behalf in all matters relating to award of the spectrum for provision of NGMSA services in Pakistan.
2. to fulfil all the requirements and formalities as may be required to be fulfilled for the award of spectrum and grant of the License applied for and on behalf of the Applicant.
3. to attend all hearings before the Authority and to provide all necessary documents and material information or assistance as may be required by the Authority for its satisfaction to issue the License applied for by the Applicant;
4. to sign all applications, correspondence, statements or other documents submitted to the Authority on behalf of the Applicant relating to award of the spectrum and issuance of the License applied for by the Applicant;
5. to execute all such documents and undertake all such acts as may be necessary in order to comply with the directions, decisions and orders of the Authority relating to award of spectrum and issuance of License applied for by the Applicant;
6. and generally to do all such acts as may be necessary or incidental for the award of spectrum and grant of the License applied for by the Applicant.

We hereby agree and undertake to confirm and ratify all acts, deeds and things which the said Attorney shall lawfully do or cause to be done in purported exercise of any of the powers contained herein.

This Power of Attorney shall not be revoked without prior written notice to the Authority and such revocation shall not invalidate any action taken by the Authorized Representative before the revocation in exercise of the powers vested hereby. In witness whereof we have signed this power of attorney at this day\_\_\_\_ of\_\_\_\_, 2014

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The Special attorney can also be a senior executive of the applicant's company and does not necessarily have to be a lawyer or person with legal background.

EXECUTANT

Seal of the Company

WITNESSES:

1. \_\_\_\_\_

National ID/CNIC NO. \_\_\_\_\_

Passport Number (in case of foreign national). \_\_\_\_\_

2. \_\_\_\_\_

National ID/CNIC NO. \_\_\_\_\_

Passport Number (in case of foreign national). \_\_\_\_\_

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### Annex E – Sealed-bid Offer

#### STATEMENT OF SPECTRUM SEGMENTS THE APPLICANT IS INTERESTED IN BUYING AT THE BASE PRICES FOR THE NGMSA

Operators are required to make initial binding offers for a minimum of 2x10 MHz of 2100 MHz spectrum. However, an applicant can state interest in buying additional spectrum for the NGMSA.

Please state below the number of spectrum segments that you are interested in buying usage rights for in the auction in the 1800 MHz category and in the 2100 MHz category, and fill out the Total Pre-Bid Deposit amount in the tables below with the stated spectrum segment(s).

#### Category A: 2100 MHz

Please state the number of segments you are interested in buying usage rights for in the auction at the base prices indicated for each 2x5 MHz lot. Note that at least 2 segments in the 2100 MHz band is a requirement to participate in the NGMSA, so 2, 3, 4, 5 or 6 must be entered in Column C. Multiply Column B times Column C and enter the total Pre-Bid Deposit amount under Column D. In column E enter the Initial Eligibility which is equal to the number of 2x5 MHz segments indicated in Column C. In Column F, enter the date and number of the instrument used for payment of pre-bid deposit.

<i>Radio Frequency Segments</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>
	<i>Base price per 2x5 MHz segment</i>	<i>Pre-Bid Deposit amount per 2x5 MHz segment</i>	<i>Number of 2x5 MHz segments</i>	<i>Total Pre-bid Deposit amount for 2100 MHz segments</i>	<i>Initial Eligibility for SMRA auction</i>	<i>Proof of Payment</i>
<b>2100 MHz Band:</b> Spectrum rights for segments of 2x5 MHz	USD 147,500,000	USD 22,125,000				

#### Category B: 1800 MHz

Please state the number of segments you are interested in buying usage rights for in the auction at the base prices indicated for each 2x10 MHz lot. Note that you can only enter 0 or 1 under column C. Multiply Column B times Column C and enter the total Pre-bid Deposit amount under Column D. In Column E, enter the date and number of the instrument used for payment of pre-bid deposit.

<i>Radio Frequency Segments</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>
	<i>Base price per 2x10 MHz segment</i>	<i>Pre-Bid Deposit amount per 2x10 MHz segment</i>	<i>Number 2x10 MHz Segments</i>	<i>Total Pre-bid Deposit amount for 1800 MHz segments</i>	<i>Proof of Payment</i>
<b>1800 MHz Band:</b> Spectrum rights for segments of 2x10 MHz	USD 210,000,000	USD 31,500,000			

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Please add Column D of the 1800 MHz category and Column D of the 2100 MHz category. This is the total amount of Pre-Bid Deposit you must submit with your application.

<b>Total Pre-Bid Deposit for 1800 MHz and 2100 MHz spectrum</b>	
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Please enter the Initial Eligibility indicated under Column E in the table below. If the award process proceeds into the Auction stage, this is your initial eligibility for the auction. You will not be allowed to submit bids for lots totalling points above this eligibility. All bidders are required to bid these eligibility points in the first round of the auction.

<b>Initial eligibility for the NGMSA SMRA auction.</b>	
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I solemnly declare that the number of stated spectrum segments in this application binds the Company to pay for this amount of spectrum at the Base Price for each segment stated in the above tables if awarded such spectrum in the NGMSA. In addition, I solemnly declare that the Company will bid for lots totalling the same amount of spectrum in category B in the first round of the NGMSA SMRA auction. I am aware that in case of a first round bid non-compliant with the number of segments for Category B stated in this declaration, PTA may retain the entire amount of the Pre-Bid Deposit, or submit a compliant bid on my behalf, or both.

Date: \_\_\_\_\_

\_\_\_\_\_  
Name and Signature of Authorized Representative

### Warning

*Candidates will note that the application must be complete when it is submitted, with the correct amount of copies, with neither mistakes nor omissions. The application shall also be submitted during the hours indicated, and at the latest by the date specified by PTA. PTA will provide a receipt of application with checkmarks on the submitted documentation. If these requirements are not met, the application can be turned down and PTA may only provide 24 hours to complete.*



## **Annex F–License Template**

A template of the NGMSA License is available as a separate document as Annex F.