COMMENTS ON NPSBN APPROACH

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Ref. No. D15PS00295

COMMENTS OF THE STATE OF MINNESOTA

THE STATE OF MINNESOTA PROVIDES THESE COMMENTS IN RESPONSE TO FIRSTNET'S SPECIAL NOTICE ISSUED ON APRIL 27, 2015.

INTRODUCTION

This document serves as the State of Minnesota response to the Special Notice; reference number D15PS00295, issued on April 27, 2015. The Notice seeks comments for FirstNet's Draft Request For Proposals (RFP). The State applauds FirstNet's Draft RFP and the opportunity to comment on the document. The State wishes to provide whatever support it can to FirstNet in order to assure a successful broadband solution in Minnesota. The State sees this initial response as the beginning of an ongoing dialog with FirstNet.

The public private partnership that FirstNet will establish through this RFP process is critical to the success of the program. The State recognizes the challenge that FirstNet faces to develop a procurement process that entices private partners to participate and maximizes competition. Due to the potential insufficiency of FirstNet's available funding and that of the public safety user fees, finding the right partner with the right resources is paramount. And due to the open nature of the RFP, FirstNet could receive proposals from very different vendors. Additionally, the RFP must minimize the time it takes to get the private partner(s) under contract.

The proposals must enable FirstNet to compare offers despite what may be starkly different approaches. As a result, the State of Minnesota made a substantial effort to provide comments to this critical document, especially with regards to helping FirstNet understand the State's priorities, expectations, and goals[1]. It is vitally important for the parties to understand how we will define success – the State, in this response, provides a framework for a successful NPSBN service in the State of Minnesota.

[1] The State of Minnesota did request additional time to review and prepare comments on the C-7 Operations Architecture matrix, where we were unable to solicit sufficient stakeholder input to complete this section due to the limited time available to focus on this important section.

The State recognizes that a successful procurement process requires proposals. As a result, the RFP needs to entice the pool of vendors that can achieve the public safety requirements to bid. A set of requirements that could limit vendor participation will not result in that vendor's best offer. We encourage FirstNet to communicate the risks associated with lack of vendor participation with the States so that we can become partners in establishing expectations and requirements appropriately and to fully leverage a competitive landscape. We look forward to the ongoing discussions regarding these matters.

The content of this document was the result of collaboration from a broad base of practitioners and subject matter experts from across the State of Minnesota. It spans a period of time prior to the issuance of the Draft RFP from work group efforts established under the State and Local Implementation Grant Plan (SLIGP) program. This feedback is then based on previous work group efforts and the work group established to address the draft RFP. The work group addressed not only what the draft RFP addresses, but its gaps. And due to the limited time available to comment on the RFP, identified issues were prioritized as a function of importance. With more time, the State could provide additional insights and feedback. The State of Minnesota would like additional opportunities to review and comment on future draft RFPs if possible.

Comments

The State of Minnesota's comments to the Draft RFP are provided primarily in three appendices to this document:

- Appendix 1: The FirstNet Comment Form
- Appendix 2: State of Minnesota Draft Launch Requirements
- Appendix 3: Proposal Requirements and Evaluation Criteria

The FirstNet Comment Form appendix is compliant with the request for the method in which FirstNet seeks response to the Draft RFP in the public notice. In this section, we specifically address various elements of the Draft RFP. However, due to the format of the comment form document, it was impractical to embed our full response in that form, and as a result, the State has provided other appendices and attachments in our response. In the comment form section, we address a number of potential differences between FirstNet's RFP and the State's requirements. The State used the NPSTC Statement of Requirements as the primary baseline for the development of these requirements. These requirements are in draft form. The Draft Launch Requirements do include specific differences between the requirements established by NPSTC and the State's requirements that FirstNet should take notice of. The State requests that the final Minnesota launch requirements are incorporated into FirstNet's requirements for its solicitation to ensure compliance. Finally, the proposal requirements and evaluation criteria appendix provides a high level view of the State's required and desired outcomes of FirstNet's procurement process.

The State of Minnesota seeks to support FirstNet with their goal to create an acquisition strategy that maximizes the competitive environment. The RFP, when issued, has to establish a baseline set of requirement directives that represent minimum requirements as documented within the "State of Minnesota's Launch Requirements". At levels below the minimum requirements established in this document and the evaluation criteria, adoption will be severely impacted. Additionally, the philosophy would strive to have bidders compete to provide additional requirements that are objectives, goals, or more aggressive desires. A clear articulation of these minimum requirements and objectives along with evaluation criteria and proposal weighting factors will enable vendors to develop innovative proposals that best position FirstNet and public safety with this opportunity. As a result, the State of Minnesota's working group that prepared these comments focused primarily on the proposal evaluation criteria and weights contained in Appendix 3.

The draft acquisition strategy recommends approaches that may not achieve the desired goals of maximizing competition and adhering to minimum requirements. For example, the Statement of Objective provides broad latitude for vendors to define implementation details. As a result, without a statement of minimum requirements, it could take FirstNet substantial time to negotiate with the chosen vendor if its proposal does not address specificity. Essentially, the RFP needs to create the vehicle for the contract. The degree to which FirstNet can express requirements and allow for creative compliance with those requirements, FirstNet and public safety will know more precisely the results of the contract and FirstNet will be able to hold the vendor accountable with specific contractual metrics. The State of Minnesota would like to see a contract that establishes clear obligations that are tied to end-user benefits, and therefore, the RFP and proposals need to focus on these factors. As FirstNet prepares its own evaluation criteria, weights, and detailed requirements, the State of Minnesota offers a preliminary view of its proposed evaluation criteria, proposal requirements, and major evaluation factors in Appendix 3 Proposal Requirements and Evaluation Criteria.

Appendix 3 also includes a section addressing three important elements to the State of Minnesota as outlined in FirstNet's Statement of Objectives: adoption, time to market, and sustainability. The working group considered these categories as receiving their own evaluation weights and evaluation factors, however, decided to incorporate these factors into the appropriate individual categories. For example, the vendor's proposal should demonstrate its ability to provide sustainable coverage and system performance. The vendor can do this by demonstrating that it has sufficient resources to maintain the network, sales, marketing, customer service, and other administrative activities for the duration of the contract. FirstNet must measure the risk associated with any proposal as well. As a result, FirstNet must score a vendor's <u>demonstrated</u> ability to sustain operations, not simply a commitment to do so. The Special Notice on Pricing documents establishes the high-level method to achieve sustainability, however, sustainability needs to be measured in terms of continued delivery of all the goods and services needed to continually and successfully meet public safety's needs and having the financial and contractual means to deliver.

The minimum acceptable requirements established in Appendix 3 are predominately based on the goods and services delivered by the commercial carriers today in Minnesota. These carriers provide a good service at a competitive price and establish the baseline for FirstNet. The goals and objectives in Appendix 3 generally strive for far greater levels of service provided by the carriers. If the private partner can deliver to these performance levels and achieve sustainability, adoption will certainly follow.

Included in the State of Minnesota's proposed evaluation criteria is a minimum acceptable requirement defining 95% of the area of each county to be served with broadband service. It is important to note that the expectation for 95% coverage was not taken lightly by the working group. In making the recommendation the State of Minnesota looked at its current statewide trunked P25 voice radio system for public safety, the Allied Radio Matrix Emergency Response (ARMER). The specification for ARMER is for 95% mobile coverage per county. ARMER exceeds this mobile coverage requirement and provides portable coverage in most areas. The State understands that it is a challenging requirement for broadband services, but it is nonetheless an important requirement. The State of Minnesota would like to emphasize to FirstNet the importance of meeting this objective, especially if FirstNet's service eventually becomes a replacement for Land Mobile Radio service. Most counties in the State already achieve 95% ARMER coverage and there is a plan to reach that goal for all counties. It is not the State's expectation that each county will be served to this degree with indoor service, or even portable service (although adequate portable coverage remains an important goal as well). This expectation is based on at minimum mobile coverage. The State encourages FirstNet to seek creative solutions to achieve this objective. For example, reliable satellite service directly to the vehicle, with pricing for devices and services built into commercially comparable fees, may be able to satisfy our needs. A new technology may also assist in providing more affordable service in these areas. And, importantly, this requirement is facilitated by the use of public safety assets. It is public safety, and not commercial vendors, that have the most assets in these areas. As a result, in requesting this level of service, it will be critical for FirstNet to include efforts to use public safety assets. The State is willing to work with FirstNet to achieve this objective.

As a result of the compressed time schedule, the working group was unable to provide attention and feedback to the Operational Architecture of the Draft RFP. The State may provide feedback at a later date and time for these items.

In conclusion, the State of Minnesota thanks FirstNet for sharing its draft RFP and for the opportunity to provide these comments. The State hopes that this document can serve as a beginning to ongoing discussions to further public safety communications. The State looks forward to these discussions and to help find the best path forward for public safety.

APPENDIX 1: FIRSTNET COMMENT FORM

Item	Page No.	Document/ Paragraph Ref/Sentence	Question/Comment	Government Response	RFP Change
1	1	Statement of Objective/C.2 Requirements Derivation/high level objectives, with minimum requirements	*Please reference Appendix 3: Proposed Evaluation Criteria and Proposal Requirements.*		
2	3	Statement of Objective/C.5 Objective/Provide and maintain a 3GPP compliant Band 14 capable device portfolio that evolves with the 3GPP standards	The Draft RFP calls for a FirstNet MVNO within the first six months. This could cause challenges if agencies were required to purchase new devices for this interim period and were then expected to replace those devices just six months later with Band 14 devices. The State would also like to draw FirstNet's attention to Appendix 2: State of Minnesota, High Level Launch Requirements Page 19 – 23 and Table 5: Device Form Factor Requirements at launch. Annex 1: Statement of Launch Requirements: MN22, 23, 25, 26 and MN27, SOR-66.1, SOR-66.2, SOR- 66.3. In order to achieve success during this initial MVNO period, the State would expect FirstNet to achieve these and other requirements. MN-22: Devices with the Apple iOS operating system SHALL be commercially available for use on the service. MN-23: Devices with the Stock Android operating system SHALL be commercially available for use on the service. MN-25: The service SHALL be competitively priced with cellular carrier services available in the state of Minnesota. MN-26: The service SHALL allow for 911 emergency calls to be made with parity to 911 calls placed over a commercial service. MN-27: The service SHALL provide carrier-grade voice telephony service.		

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3	5, 6	Special Notice/Category One encompasses a single nationwide approach whereby an bidder would be responsible for the provision of all necessary high-level functions	The State is concerned with this approach. If a nationwide partner is not feasible, the approach will not acquire a core and the core services. Likewise, if a nationwide partner indicates that it would withdraw its bid if certain States were excluded (either by FirstNet's selection of another RAN vendor or by a State's opting out), then the process may leave the States without a core. FirstNet should seek a flexible approach that provides service to all States with the ability to award contracts as needed to achieve a nationwide approach.		
4	5, 6	Special Notice/The smallest area of service is a State.	FirstNet should encourage the participation of partial State partners such as rural telcos, utilities, tribal or other independent partners not interested in serving a full State. While FirstNet's evaluation criteria and requirements may incentivize such partnerships with a prime contractor, it may not be enough to overcome business differences. As a result, FirstNet should allow secondary parts of each State to be awarded to other vendors if necessary. Such a solution may come after negotiations occur with the primary State partner (i.e., the partner does not commit to service a portion of the State, and therefore, FirstNet goes back out to bid for that portion of the State). If FirstNet needs to be able to complete the project in a single procurement vehicle, it could evaluate these partial State partners by awarding points that provide preference for an integrated solution for the entire State. This recommendation protects against a no bid situation which could occur if no party is willing to offer a pre-defined region or State wide solution. As written, partial State bidders would not be able to participate in the RFP if they cannot identify a viable partnership. Furthermore, FirstNet should consider how tribal lands and partnerships with the tribes can be integrated into the national plan. For example, a tribe may currently provide cellular service. If such a tribe wishes to provide public safety grade service using Band 14 and chooses not to partner with a nationwide or		

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			multi-state provider, how could it participate in providing service for its tribal lands?		
5	7	Special Notice/4.5 Proposed Pricing Methodology/ FirstNet expects potential bidders to agree to a most favored customer pricing arrangement	While a most favored customer is desirable, the State of Minnesota requires pricing competitive with the commercial carriers. If the bidder is a carrier, then this approach would work. If the bidder is not currently a carrier, it would not work. A bidder that does not intend to provide services on par with pricing from the existing commercial carriers could essentially price the service as desired. The State of Minnesota has specified its comments in *Appendix 3: Proposal Requirements and Evaluation Criteria. Cost Criteria.* In addition, please see *Appendix 2:"State of Minnesota, High Level Launch Requirements" Annex 1: Statement of Launch Requirements: MN-8, MN-25* MN-08: Roaming charges SHALL be included in the price provided to public safety users without a separate usage surcharge incurred when users are roaming off of the service. MN-25: The service SHALL be competitively priced with cellular carrier services available in the state of Minnesota.		
6	7	Special Notice/4.6 Proposed Quality Assurance Surveillance Plan/ Flexibility in the QASP is essential in order to allow for an increase or decrease in the level of	We recommend that the QASP clearly define KPIs in an effort to allow bidding parties to understand the cost of operating and building a quality network to meet FirstNet requirements. FirstNet should define all metrics as well as the formula for calculation. The KPIs should be established to provide service quality equal or better than the leading commercial carriers. Different vendors will define metrics in different ways using different formulas for calculation. If the metrics are not set by FirstNet the offers will not be comparable and FirstNet will not know what level of quality is received. For example, the availability requirements have substantial capital and		

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		surveillance necessary based on contractor performance and situational needs.	operating cost impacts but are not specified in the QASP. The operational cost associated with operating a network with 99.0% availability are far less than operating the network with 99.999% availability. Similarly the cost to build a network with 99.999% availability requires far more hardening and redundancy along with the associated costs.		
7	9	Special Notice/5.1 Proposed Period of Performance/ The base period of performance goes to 2022, with two five year options to extend.	The minimum coverage requirements as described must be an obligation of potential bidders. Appendix 3 provides the State of Minnesota's recommendations regarding scoring and requirements around coverage. Note that these requirements leverage the forthcoming Build-Out Strategy and Priorities document. Proposals should be given more weight according to the levels and quality of coverage that they provide. In addition, a base period of 5 years may not allow potential bidders to recoup their investment. We understand that FirstNet's license is potentially limited to 2022, and therefore, FirstNet must limit the period of performance to that time frame. However, we are concerned that build investments may be curtailed as a result of a shorter return period.		
8	27	QASP/ Appendix – Availability metric of 99.99%	The State of Minnesota recognizes the challenge associated with delivering a public safety grade (99.999% availability) service. The State believes that the bidders should have to compete towards "public safety grade" such that more points or weight is given to vendors who will guarantee, over time, that they will achieve the objective. See evaluation criteria for more information.		
9	6	Pricing Concepts/2.1.1 Pricing Concept for Category One/ The potential bidder would be required to propose fixed quarterly payments to	The Draft RFP implies that quarterly payments are FirstNet's only revenue source to cover its operating expenses (e.g., it implies that the private partner keeps revenues from the Covered Lease Agreements). Unless FirstNet has established a low risk alternative funding source, the RFP's approach could result in minimum quarterly payments less than FirstNet's costs. It is critical that FirstNet has the resources to oversee the private partner's work and ensure FirstNet's objectives are achieved. The State recommends a guaranteed minimum annual fee set up to cover the cost of ongoing FirstNet operations		

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		FirstNet	costs. The quarterly payment could vary, but not less than this minimum value to oversee operations.		
10		Minimum Technical Requirements/C.3/	The NPSTC Statement of Requirements is only referenced in the document and only for information purposes. Minnesota Working Group has thoroughly reviewed NPSTC SoR and has developed additional requirements beyond the NPSTC document that are not addressed in the RFP. We recommend that FirstNet adopt State of Minnesota requirements that are listed as "Shall" requirements as mandatory elements of a proposal and for the vendors to compete on the "Should" requirements (i.e., if they comply with these non-mandatory requirements, they receive additional points towards their overall evaluation). *Please reference Appendix 2:"State of Minnesota, High Level Launch Requirements" in addition Appendix 3 provides minimum and desired requirements regarding additional proposal elements.*		
11	5	Statement of Objectives/C.5 Objectives/ Integrate existing State, local, commercial, federal infrastructure to support NPSBN services.	We recommend that all State, Local and Federal infrastructure assets be shared in an appendix for potential bidders to assess the value. The State understands that there may be some risks associated with these assets. However, the data regarding these assets could indicate what additional permits or other approvals are required before the partner can use the asset. Without this information, The Bidder will be unaware of assets and locations and could benefit from knowledge of the public safety assets and propose additional coverage. Knowledge of these assets could reduce the deployment costs and speed time to market.		

APPENDIX 2: STATE OF MINNESOTA'S DRAFT LAUNCH REQUIREMENTS

Introduction

The State of Minnesota established a number of working groups to determine the State's requirements for the NPSBN. The document is currently in draft form, however, the State of Minnesota believes that sharing it in its current state will shed light on the State's requirements, especially in areas where these requirements may seem to conflict with or expand upon FirstNet's Draft RFP. This document is referenced extensively in the comment form (Appendix 1) and is also referenced extensively in the evaluation criteria (Appendix 3).

Document Purpose

The attached document contains the State of Minnesota's requirements for adoption of NPSBN service. These requirements are not the requirements of *the State of Minnesota*, as a legal governmental entity, but rather the requirements of *public safety agencies throughout Minnesota*. These requirements were developed by a collaborative group of 43 public safety experts representing all levels of government and all disciplines. Firefighters, law enforcement, paramedics, elected sheriffs, telecommunications technicians, engineers, and volunteers from state, federal, county, local and tribal government as well as the private sector from every corner of the state, representing many hundreds of volunteer hours of effort, are all represented within this set of requirements. We can confidently present these requirements as comprehensive, based on best-practices, and strongly representative of stakeholder needs throughout the State.

These requirements are agnostic; they do not prefer any particular implementation approach or vendor technology. They focus strongly on the "What"—that is, *what the requirement is*, and not the "How"—that is, *how the requirement is satisfied*. These requirements were developed such that they could be relied upon just as easily to review FirstNet's proposal to the State as they could be to form the basis of a State request for proposals for development of stand-alone network.

Document Scope

These requirements are targeted towards the **launch window** for NPSBN services. "Launch window" means a period at and immediately following the launch of FirstNet services. These requirements do **not** represent the State's long-term expectations for FirstNet service. Long-term requirements out-of-scope of this document include fundamental mission-critical features, one-to-many push-to-talk voice services, which are not part of present State FirstNet planning priorities.

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Appendix 3: Proposal requirements and Evaluation Criteria

This appendix provides details regarding the primary recommendations regarding the architecture of the FirstNet NPSPN RFP. Noting that the State expects other RFPs for other services or features associated with FirstNet's net offering (e.g., specific application hosting), this section deals with the intent of this instant RFP to build, operate, and maintain the NPSBN. It addresses the elements that should and should not be included in the RFP, evaluation criteria and weights of vendor proposals, and proposal requirements. The State recognizes that other elements may also be needed in the evaluation (e.g., opt-out RAN integration and its costs), however, this document is intended as a high-level perspective of the State's priorities and needs.

Scope of NPSBN RFP

In order to establish evaluation criteria and proposal requirements, the working group first established a framework for how FirstNet should aggregate its overall responsibilities among one or more RFPs. The State's working group discussed the elements that should be included in FirstNet's primary RFP to build, operate, and maintain the NPSBN. The working group feels that FirstNet should establish the responsibilities and activities of a typical cellular carrier as the benchmark for this main solicitation. For example, FirstNet should not mandate that the NPSBN vendor create an application ecosystem. This could tend to force partnerships among vendors that are not necessary. In general, the working group determined that FirstNet should not mandate any "over the top" applications as part of this solicitation. Instead, FirstNet should focus on applications that are intricately interwoven with LTE (e.g., VoLTE) that a commercial carrier must offer today.

The State recognizes the importance of some of the additional services referenced in its draft RFP, however, the State believes that FirstNet would be better suited to issue a separate solicitation that included detailed requirements and allowed for an additional revenue source. For example, Google and Apple administer their application stores and establish a separate relationship from the carriers with the consumer. FirstNet could have the same type of arrangement or could simply require the NPSBN vendor to provide billing services for the chosen vendor if a single invoice is required. Likewise, FirstNet should seek a single NPSBN vendor that will be responsible for sales, marketing, and customer care of the FirstNet service, as a carrier would. This would avoid finger-pointing and excess costs associated with segregating the services between multiple vendors. Separating these factors would result in risk that the CLAs would not generate sufficient revenues for the sales, marketing, and customer care functions.

Along the same vein, FirstNet should avoid additional responsibilities on public safety agencies. The working group identified a number of additional responsibilities placed on dispatchers and other public safety personnel that would cause operational issues. FirstNet must seek technical and operational solutions that enable the right quality of service transparently. The statement of objectives document lists "high level objective with minimum requirements, allowing latitude for contractors to define implementation details." As a concept this has the advantage of gaining creative responses to the

objective of providing nationwide coverage. However, those bids may be very different and FirstNet will need a mechanism to compare them. FirstNet has already indicated that evaluation criteria will be included in a subsequent RFP (Section M). The State of Minnesota has taken the initiative to develop a preliminary set of evaluation criteria, scoring weights, and proposal requirements to assist FirstNet in developing this document and to help FirstNet understand the State's priorities. In addition, the proposal requirements establish what the State expects to see in FirstNet's plan from its proposed vendor as well as to assist in the evaluation.

The State of Minnesota work group evaluated the FirstNet Statement of Objectives (SOO) and incorporated the SOO into eight major evaluation criteria categories. The major categories and the associated preliminary weights established by the work group are provided in Table 1 below.

Table 1: Major Evaluation Criteria with Weight

Primary Category	Weight (%)
Coverage	20
Service Availability	16
Devices	13
Cost	16
Security	5
Marketing and Customer Care	10
Applications	10
Quality and Features	10

These criteria are further subdivided providing both minimum requirements as well as objective or goal State descriptions. The full criteria for evaluation can be found in Table 2. It should be noted that for the most part these 8 criteria fully represent the majority of the 16 original objectives defined by FirstNet on Page 3, C.5 Objectives in the Statement of Objective. The top three criteria: Coverage, Service Availability, and Cost represent a full 52% of the total scoring weight.

Within the eight major criteria we have changed the definition of Applications to be only core applications. Specifically, any app that is tightly woven into LTE or the network should be included as an application. Applications that are over the top or that can be delivered by any vendor should be pulled out of this RFP.

In addition to the qualitative and quantitative approach to scoring there are three additional key concepts that need to factor into the analysis: sustainability, time to market and adoption. Initially the working group considered including these three concepts as major evaluation criteria but later decided that these concepts cross each and every major criteria. Each of the major criteria has to be proven sustainable by the bidder while time to market represents an opportunity to exceed minimum requirements in the evaluation approach of each major criterion. Finally, the winning bidder should exceed minimum criteria, thus incentivizing adoption by the user community, by offering a superior

network and user experience. In other words, adoption is already "built-in" to requirements and evaluation criteria. Including it again would be duplicative.

The following table provides the evaluation weight, minimum acceptable requirements, and goals and objectives for each evaluation category. The requirements contained in this table are not intended to be comprehensive. Instead, they provide the key attributes in each category. FirstNet should consult the detailed requirements in Appendix 2 to augment these requirements and others as needed.

TABLE 2: EVALUATION WEIGHTS AND CRITERIA

Within this table the concept of "commercial grade or commercial" is used frequently to describe services provided by the top tier wireless carriers. As an example, vendors would be required to provide security equivalent to industry leading commercial carriers. FirstNet should develop specifications that clearly define the commercial grade requirements so they are measurable benchmarks for the bidders.

Criteria	Weight	Minimum Acceptable Req.	Objective/Goal
Coverage	**20%**		
•Amount of Band 14 Coverage	6%	Vendor shall provide sustainable Band 14 coverage, according to the defined schedule, in all critical and extended services areas defined by the State of Minnesota build-out strategy and Priorities document to be issued in September.	Vendor should cover all critical, required and extended service area as defined by stakeholders in the State of Minnesota Build-Out Strategy and Priorities document to be issued in September. Vendor should deliver coverage milestones faster than described in the State of Minnesota Build-Out Strategy and Priorities document to be issued in September.
•Quality (indoor / outdoor, Mbps, seamless)	5%	Vendor shall provide sustainable indoor coverage and throughput equivalent to commercial grade service. Vendor shall provide for roaming on all indoor solutions via roaming as a minimum but must provide band 14 indoor DAS solutions for all major venues including stadiums, arenas and convention centers.	Vendor should provide through-put that leverages capacity from other spectrum bands (non-Band 14) to address the net capacity needs of public safety in a major emergency. The vendor should provide indoor service levels and throughput per the State's forthcoming requirements as described in the State of Minnesota Build-Out Strategy and Priorities document to be issued in September.

Criteria	Weight	Minimum Acceptable Req.	Objective/Goal
		Vendor shall provide service that transitions between Band 14 and roaming coverage must be seamless for all devices including hand held form factors.	
•Growth and Deployables	4%	The vendor shall maintain sustainable equivalent or better net coverage to the commercial carriers. The vendor shall provide deployable systems (e.g., MCUs or COWs) for pre-planned and unplanned emergencies equivalent to the programs offered by the commercial cellular carriers.	The vendor should describe details regarding a program that allows investments from state and local governments to partially or wholly finance addition coverage. The vendor should provide specific metrics for annual growth and coverage that clearly and definitively establish commitments to grow the coverage of the system. The vendor should offer deployable systems that provide specific and rapid response times and allow for public safety influence over pre-planned event participation. The plan shall address the guaranteed "in service" time lag for various parts of the country. The vendor should deliver emergency coverage and capacity within four hours anywhere in the Continental United States and should offer drones and

Criteria	Weight	Minimum Acceptable Req.	Objective/Goal
			similar solutions to address emergency coverage.
•Net Required Coverage including - Roaming	5%	The vendor shall provide a sustainable net aggregate (combined roaming, indoor and Band 14) coverage that addresses the required service area, as defined in the MN Strategic Launch document, at IOC-1 (6 months after award). The vendor shall provide net coverage that achieves 95% coverage by county. The vendor shall prioritizes Required, Extended and Critical service areas as defined in the Strategic Build-Out no later than FOC . The vendor shall also provide sustainable international roaming with industry leading Canadian coverage.	The vendor should allow roaming with the two industry leading national carriers.
Service Availability	**16%**		
•Physical hardening, number of 9's	5%	The vendor shall provide service availability of a commercial grade network defined as 99.9% availability.	The vendor should deliver increasingly available and reliable service state wide as follows: IOC 3 - 99.95%, IOC 4 99.99%, FOC 99.999%. In addition, the vendor should provide specific site hardening and availability per the State of Minnesota Build-Out Strategy and Priorities document to be issued in September.

Criteria	Weight	Minimum Acceptable Req.	Objective/Goal
			Note: Potential stakeholder action item would be to address the priority that hardening is less an issue in rural areas.
•Priority / Preemption	6%	The vendor shall provide easy to manage priority and preemption that minimizes the distraction of Dispatchers and Incident commanders that provides all the priority and preemption mandated on Band 14 plus make it simple to use (i.e., automatic).	The vendor should provide Priority on the roaming partner and on vendor's other spectrum assets
•Service Restoration	5%	The vendor shall provide current best in class commercial service levels.	The vendor should have available additional resources (overload resources) to ensure highly available system service in the event of an emergency planned or unplanned. The vendor should provide a program that demonstrates that the vendor can provide higher levels of availability for these events. Including the use of deployables to be used to quickly restore service.
Devices	**13%**		

Criteria	Weight	Minimum Acceptable Req.	Objective/Goal
•The top commercial devices, incl. iOS	10%	The vendor shall provide a selection of consumer cell phones, smartphones, portable routers, consumer tablets and laptops. Devices with the Stock Android operating system SHALL be commercially available for use on the service. Devices with the Apple iOS operating system SHALL be commercially available for use on the service.	The vendor should have a sustainable and identical device portfolio as a Tier 1 commercial provider and deliver the latest devices within the same time frame as the major Tier 1 commercial provider.
•Specialized incl. direct mode	3%	The vendor shall provide specialized devices including vehicular routers & sensor/M2M devices. Vendor shall provide flexibility for users to purchase specialized devices from third party providers. Please reference "State of Minnesota, High Level Launch Requirements" Table 5: Device Form Factor Requirements at launch for more details.	The vendor should provide specialized devices including Deployable camera, remote weather sensor, remote controlled and remote multi-media devices. The vendor should offer at least two smart phone style devices that offer proximity services (direct unit-to-unit communication). Please reference "State of Minnesota, High Level Launch Requirements" Table 5: Device Form Factor Requirements at launch.
Costs	**16%**		

Criteria	Weight	Minimum Acceptable Req.	Objective/Goal
•Cost of Services, MFN, International Roaming	11%	Vendor shall provide competitively priced services as compared to commercial service provider. Vendor shall include/absorb costs of roaming in the cost of service. There can be no incremental cost of roaming over and above monthly service fees. Vendor shall offer service plans that are competitive with commercial plans i.e., unlimited bulk data plans, family plans. Vendor shall modify its service plans to maintain competitive rates. System administrator shall be able to disable international roaming as needed on a per user or per group basis.	Vendor should include/absorb cost of international roaming fees.[2] Vendor should offer discounts to commercially competitive rates to incentivize adoption.
•Cost of Devices	5%	Vendor shall provide devices that are competitively priced as compared to commercial carriers. Vendor shall offer device acquisition plans that are competitive with commercial offerings that are subsidized	Vendor should offer device discounts to stimulate adoption. Vendor should offer tiered pricing with decreasing costs based on volume purchased to stimulate adoption.

[2] FirstNet should negotiate reciprocal roaming agreements with international public safety network providers to achieve this objective.

Criteria	Weight	Minimum Acceptable Req.	Objective/Goal
		or otherwise financed.	
Security[3]	5%	Vendor shall provide security that is equivalent to industry leading commercial carriers.	
Marketing & Customer Care	10%		
•Tech Support / Customer Care	5%	Vendor shall provide sustainable live response for customer care support during business hours 9/5.	Vendor should provide live response for customer care support 24/7/365. Vendor should provide online portal to enable public safety to view and track trouble tickets.
•Billing	3%	Vendor shall provide sustainable detailed billing that is equivalent to commercial carrier level of reporting.	
•Training - devices/administration	1%	Vendor shall provide sustainable ongoing new device & service training. Vendor shall provide train the trainer sessions on a state region basis.	
•Retail Customer Support	1%	Vendor shall provide sustainable retail customer support to serve non-government funded agency public safety users (i.e., BYOD and volunteers.) Vendor shall provide sustainable online	Vendor should offer sustainable brick & mortar facilities (i.e., leveraging existing retail infrastructure) to provide fulfillment, customer care, training, billing resolution, sales in support of PS user needs. (Including BYOD and volunteer).

[3] FirstNet should not require security measures that will degrade the system quality. FirstNet should expect end-users to secure their data independently, and the State of Minnesota is concerned that excessive security requirements could degrade quality. The State of Minnesota also cautions FirstNet to avoid security requirements that may prevent viable bidders from participation. For example, an existing carrier may find Federal security requirements onerous. The State's requirement of commercial equivalent security for the protection of the network is considered sufficient.

Criteria	Weight	Minimum Acceptable Req.	Objective/Goal
		and phone fulfillment, customer care, etc. for BYOD and volunteers.	
Applications	**10%**	**Note:** Workgroup agreed that FN should pull out of this RFP all "over the top" applications that can be delivered by any vendor. Specifically, any app that is tightly woven into LTE/the network, should be included. Any that is not, should be excluded.	
•Voice, Text	6%	Vendor shall provide VoLTE, text and location services at launch. Vendor shall provide CMAS, IPAWS and other mandatory services of a commercial wireless carrier at launch.	Vendor should provide "HD Voice" or toll quality voice for public safety use.
•Group Comms (PTT)	2%	Vendor shall provide mission critical PTT & Group Communications 60 months from award (FOC). Vendor shall provide PTT and Group communications that interwork with ARMER.	Vendor should provide mission critical PTT & group communications earlier.
•NG911, Video, other over the top	2%	Vendor shall provide public safety grade video services by FOC. Vendor shall provide for video sharing across PSEN.	

Criteria	Weight	Minimum Acceptable Req.	Objective/Goal
		Vendor shall provide NG911 capability when such services are available to the public. Vendor shall provide status web page at launch. Please reference "State of Minnesota, High Level Launch Requirements" Table 4: Minnesota Deployment and Enablement Requirements for more details.	
Quality & Features	**10%**		
•System Performance	6%	Vendor shall provide sustainable nationwide system performance consistent with Tier 1 commercial provider. (e.g., blocking less than 1%)	Vendor shall provide sustainable state wide system performance consistent with Tier 1 commercial provider. (e.g., blocking less than 1%)
•Innovation	4%	Vendor shall provide future 3GPP releases and 5G deployment within 12 months of Tier 1 commercial carrier release.	Vendor should specify additional sustainable innovative programs that will meet or exceed public safety needs.

Proposal Requirements

It is expected that there will be a multitude of bidders to the FirstNet RFP when issued. The responses will likely come from wireless network operators, network integrators and new carrier entrants. It would be important for FirstNet to outline, for the potential bidders, what the proposal requirements should include. The approach of managing the proposal requirements will also make it easier for FirstNet's evaluation of the final responses. In addition, the State of Minnesota provides these proposal requirements to provide a preliminary perspective in what the State would like to see in FirstNet's proposed plan.

The bidders should provide a response to the RFP that is laid out similar to the major evaluation criteria topics. The responses should include:

1. Introduction
2. Coverage
3. Service Availability
4. Devices
5. Costs
6. Security
7. Marketing and Customer Care
8. Applications
9. Quality and Features
10. Sustainability, Time to Market, and Adoption
11. Financial Offer

Introduction

Each bidder should provide an introduction of their offer to provide a nationwide public safety broadband network. The bidder should introduce the parties or partners that will provide the nationwide solution and document attributes of their solution, partnerships, financial wherewithal, or experience that would otherwise establish them as the best solution provider and partner for FirstNet.

Coverage

Bidders should be instructed to provide hard and soft copy maps of their proposed coverage over the key rollout milestones starting at IOC-1 (6 months after award) through IOC-5 (48 months after award) and finally FOC (60 months after award). At each milestone the bidder should provide hard and soft copy maps of the amount of: Band 14 total coverage, Band 14 rural coverage, indoor coverage and coverage provided by a roaming solution. The bidder shall also provide the guaranteed percentage of coverage on a nationwide, statewide, and per County basis. The bidder should document their planned use of Mobile Virtual Network Operator (MVNO) non-Band 14 or other non-Band 14 roaming arrangements as well as the planned use of satellite or deployables as a coverage extension.

Furthermore, bidders should document their approach to coverage addressing four areas of importance: Amount of Band 14 Coverage, Quality (which should address indoor, outdoor, throughput and the seamless nature of roaming), Growth, and Net Required Coverage which should include roaming/MVNO.

The bidder should include a quality description for the proposed network. The quality of the network should at a minimum include the amount of indoor coverage as well as the expected throughput of the network. The bidder should provide both statistics regarding its committed amounts of indoor coverage and throughput areas as well as maps associated with its plan. If roaming is to be used to provide coverage the bidder should describe how they will provide seamless roaming from the Band 14 network to the proposed roaming partner/solution. The bid should specifically address how a seamless transition will occur for single modem handheld devices.

Growth of the RF network over time will be a critical element to overall coverage as well as satisfaction with the quality of the network. The bidder should describe how they intend to grow the network over time. The amount of Band 14 coverage will address new coverage but the bidder should also describe how they will grow the existing coverage over time to address capacity and quality issues in the network. For example, the bidder should identify sector loading level measures and dropped call rates that will trigger cell splitting.

In the final coverage section the bidder should describe the net coverage that will be offered to the FirstNet user. The net coverage should describe the use of roaming, or an MVNO, to provide the maximum coverage to the user. Specific description of how coverage will be seamless at points of roaming along national borders or Band 14 to roaming partners within the net coverage area.

Service Availability

Service availability needs to describe a number of key concepts which address: the ongoing reliability of the network as well as the ability to provide service during a major event, planned or unplanned, and the ability to quickly restore service in the event of a network outage.

The bidder should provide a description of how they intend to provide physical hardening on the RF network. Specific attention should be given to site hardening including requirements for redundant backhaul, use of batteries, and use of generators as well as descriptions of special protections provided to “critical sites.” Classification of what qualifies as a critical site could be provided in terms of traffic thresholds or site quantity dependencies on a critical site. For example, a site will be classified as “critical or hub site” if more than 6 other sites have a dependency.

Further detail and attention should provide a description of physical hardening activities that will be afforded to the core network locations. The amount of battery, or standby power as well as the generator or standalone power, and how long each can provide independent power should be explained. The bidder should explain or provide their “business continuity” and “disaster recovery” plans. The bidder should explain all security protocols to be used in securing the core network assets.

The description should include physical measures to deny unauthorized access to facilities, equipment and resources.

The public safety and first responder users of the FirstNet network require network features that allow for priority of usage as well as preemption of services in the event of a planned or unplanned event. Please provide a description of the proposed solutions that will allow for priority or preemption of the Band 14 network. The proposal should make the solution as transparent as possible to public safety users. The proposal should also address the proposer's use of other spectrum bands and the type of priority and preemption that will be provided over those bands.

Finally, in the event of an outage, the bidder should describe what operational programs will be used to restore service in the quickest possible way. What level of availability should FirstNet expect and does the bidder have any demonstrable metrics or other network's availability metrics that could be used as an example of what could be expected.

Devices

The bidder should provide a device catalog with the types of both commercial off the shelf and specialized devices that they can offer to the FirstNet subscriber. Device offerings should include both hardware manufacturer as well as the device operating system. If the bidder is offering specialized devices, they should provide descriptions of the specialized device as well as the device operating system. If the proposer is offering a solution that uses Band 14 in devices that are sold to the public, the proposer should specify the volume of the consumer devices and how such a sale impacts the availability of broader devices to public safety.

Costs

Bidders are expected to provide costs of both their device and service offering. The types of service plans being offered with descriptions of what the plans include, i.e., minutes of use, data use and text messaging should be included. The bidder should explain any service plans available such as unlimited data, family plans (for volunteers or BYOD customers) or other offerings. A description of the cost of device offerings should be included in this section with explanations of how the phones might be subsidized or otherwise financed to the user. The bidder should describe any program that offers special promotions to stimulate adoption of the service. The bidder should provide its proposed device portfolio at launch and at IOC 1.

Security

Bidders are required to explain the tools, protocols and guidelines, as well as industry standard solutions that will be used as a best practice for maintaining security on the network. The bidder will identify how it intends to safeguard the network from a physical and cyber security perspective. The bidder will provide specific, measureable, methods for its security plans, including periodic third party security audits and other industry standards. The bidder will also identify its commitment to ongoing compliance with FISMA and NIST Cybersecurity Framework as well as other industry standards from IEC, ISA/ANSI,

ISF and others as appropriate. The bidder will also identify how compliance with these standards will impact system performance or features.

Marketing & Customer Care

Bidders should respond with their approach to customer care and marketing of products and services to the Public safety, or any other users expected to use the network. At a minimum the bidder should describe their approach to sales and marketing, technical support and customer care, billing and invoicing and whether or not there will be retail brick and mortar facilities. The bidder is required to fully explain their approach to interacting with the Public safety user entities. What tools will be used for order management, online management for administrators as well as any opportunities for touch points in support of the customer.

The bidder should explain their approach to marketing and sales. Will the bidder establish state contracting vehicles for all states? Will customers have the opportunity to visit retail distribution or will all sales be done via online sales channels? What type of post-sales support will be offered for new devices as well as understanding of services and service billing? What type of support will be offered to customers? Will support be offered online, or in retail locations and what will be the business hours of support offered to subscribers? How will specialized devices be marketed and sold to customers? Please explain the entire sales approach as well as different retail distribution approaches to be offered.

In addition, the bidder should provide a description of the types of tools that the customer will have access to including all online portals and account administration tools. What training will be provided for account administration, services and devices? Describe the entire sales, marketing and support offering to the FirstNet customer. Since a large portion of the public safety community is maintained by volunteers it would be important to describe how these volunteers might be migrated to the FirstNet network.

The bidder should provide a detailed plan regarding customer care. The plan should address the size of its customer care organization, if it is shared among other services (e.g., commercial users), and how it intends to address both technical and administrative support functions. The bidder should propose specific customer service metrics (e.g., call wait times). The bidder should also specify how it will support both individual (BYOD and volunteer) and enterprise (public safety agency) users.

The bidder should also provide a detailed training offering indicating how it will provide this service to public safety. The offering should address how the bidder will staff its training service, where public safety can receive the training, how often, and for what subject areas.

Applications

The bidders are required to provide description of all Band 14 core LTE applications, i.e., tightly woven into LTE or the network and not over the top applications offered by third parties. Of particular interest the bidder should describe their voice, text, location, PTT, Group communications, Next Generation 911 and video service offerings. Of particular interest the bidder should provide timelines for availability on

the Band 14 network for all core application offerings with standards based descriptions of each application. The bidder should provide a mechanism for FirstNet to offer hosted applications such as the application ecosystem as well as other hosted applications in the future. The bidder should specify how it intends to enable such a capability (e.g., providing space in its data centers, connectivity to industry leading third party data centers, etc.).

If the bidder wishes to include their approach for an application ecosystem they should explain what type of public safety related content would be offered on said ecosystem. Describe what type of ecosystem support would be provided. In addition, explain how the application ecosystem would be kept up to date and relevant to the public safety community.

Quality and Features

It is expected that the FirstNet wireless network will be maintained as a state of the art network that would become the reference for performance, reliability, availability and of course impeccable quality of service. The bidder should explain how they intend to provide innovation on the network over the expected lifecycle of the network. In addition, the bidders should explain the operational and maintenance approach to providing superior system performance on the network. Special attention and detail should be provided regarding the types of operational metrics to be managed and what the expected key performance indicator (KPI) is expected as a result of the operational and maintenance procedures. The bidder should provide specific, measurable KPIs that are evaluated on a periodic basis (e.g., weekly or monthly) for compliance. The bidder should also identify the area over which it will be accountable for compliance to these KPIs (e.g., statewide, citywide, etc.) and the specific levels of compliance over time.

Sustainability, Time to Market, Adoption

Sustainability

The bidder should demonstrate, for the all eight major evaluation criteria, how they will provide sustainability to the approach. As an overriding philosophy, it is expected that the bidder describe how their business case achieves financial sustainability throughout the lifecycle of the network. In general, the bidder will identify how it will be able to continually afford high quality broadband service and all associated functions in support of the service delivery. As part of this demonstration, the bidder should identify the cost associated with maintaining each of the eight major evaluation criteria as well as how it intends to fund these elements. FirstNet should evaluate the risk associated with each proposal's intended solution. For example, if the proposer grossly underestimates the cost to deliver a service, FirstNet should identify this as a risk. In addition, the degree to which planned revenues are at risk should also be evaluated. In general, FirstNet should evaluate the experience of the bidder and its demonstrated ability to execute on the bidder's plan. This should include experience with public safety agencies and tribal nations. Sustainability must also address FirstNet's operations. The bidder should describe what payments will be delivered to FirstNet to cover their cost of administration. The cost of

operating the system, growing the system, and managing all aspects of a wireless network have to be demonstrated as funded through the revenue from user fees and the covered lease agreements.

The following sections provide more specific details regarding demonstrated sustainability for individual evaluation criteria.

Coverage:

1. In demonstrating sustainability, the vendor shall include in its proposal its estimate for the cost to operate the System as envisioned. This includes all operating elements such as sales, marketing, and customer care. The proposal shall include specifics regarding how the vendor will generate sufficient revenues from User Fees and Covered Lease Agreements equal to or in excess of these estimated costs.
2. In the proposal, the bidder should explain how the cost of ongoing network coverage will be offset by revenues that maybe guaranteed or more likely.
3. The evaluation of sustainability will include the degree to which the vendor understands and has properly allocated sufficient resources towards all costs associated with implementing and sustaining the required services.
4. Coverage sustainability shall include a demonstration of the ability to cover roaming costs as part of basic service costs.
5. Because the marketplace is not stagnant, the bidder must identify how it will sustain coverage growth. For example, what is the amount of money it will invest in coverage growth each year?

Service Availability:

1. To demonstrate sustainability the bidder has to demonstrate that the up front and ongoing costs of physically hardening the network can be supported through the funding sources available via revenue and CLA.
2. To the extent that the bidder proposes to meet hardening requirements over time, the bidder should identify the amount of money it intends to invest in hardening the network and to ensure that its income stream can accommodate the investment.
3. In demonstrating service availability the bidder should reference availability achievement on other similar wireless networks.

Devices:

1. In demonstrating device sustainability, the vendor shall include in its proposal factors which determine the likelihood of achieving the proposed device portfolio. This includes any firm commitments from device manufacturers that are needed to meet the requirements as well as commitments from the vendor to fulfill the device vendors' minimum order requirements.
2. The bidder should also identify how it intends to provide innovative and future devices to its offering. For example, the bidder could identify how it will be able to integrate the latest

products from market leaders such as Apple, Samsung, Motorola, and HTC on an ongoing basis. The plan would also address how the bidder will entice other new and innovative entrants to the market.

Costs:

1. In demonstrating a competitive cost for services and devices the vendor shall include in its business case a service and device cost that competes with commercial wireless carriers today and through the lifecycle of the network.
2. The bidder shall also include specific metrics regarding when and how it will adjust its pricing to remain competitive with alternative providers. For example, a bidder may re-evaluate its pricing every quarter such that it remains no higher than any competitive offering.
3. The bidder's proposal must demonstrate that it can sustain expected cost variations. This can be demonstrated via ongoing cost reduction techniques or otherwise indicate its business model can sustain such variability in public safety revenues that would result from potential reductions in cost.

Time to Market

Wherever possible the bidder should show how they intend to exceed minimum time to market thresholds and exceed expectations for early delivery. In general, Table 2 above identifies specific timetables for expected delivery of capabilities. If the vendor exceeds these expectations, FirstNet should award more points to the bidder.

Adoption

Adoption will be driven by a combination of coverage, service availability, a competitive portfolio of devices and costs that are in-line with alternative service providers for public safety (e.g., commercial carriers). The vendor will serve the objective of adoption by exceeding user expectations in these four categories. Beyond providing products and services that exceed user expectations the vendor should describe any programs or incentives targeted to drive adoption of FirstNet. For example, the vendor could make specific commitments to adoption levels and have automatic price reductions to accelerate adoption.

Financial Offer

The financial offer will provide the complete financial perspective of the bidder's proposal. It will include the guaranteed payments to FirstNet, the cost of operations over time (including investments in growth and technology refresh), and the planned revenues from user fees and covered lease agreements. FirstNet will evaluate the risks associated with this financial offer (the appropriateness of the costs and the feasibility of the revenues) in its evaluation.