Before the
**DEPARTMENT OF COMMERCE**
**NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION**
Washington D.C. 20230

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| In the Matter of | ) | |
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| Development of the State and Local | ) | Docket No. 120509050-1050-01 |
| Implementation Grant Program for the | ) | |
| Nationwide Public Safety Broadband Network | ) | |

**COMMENTS OF MOTOROLA SOLUTIONS, INC.**

Motorola Solutions, Inc. ("MSI") hereby responds to NTIA's Request for Information ("RFI")[1] on issues relating to the development of the State and Local Implementation Grant Program ("SLIGP") to be established pursuant to the Middle Class Tax Relief and Job Creation Act of 2012 ("the Act").[2]

**The Consultation Process**

As detailed in the RFI, the Act requires FirstNet to consult with regional, state, tribal, and local jurisdictions on a wide range of activities that will impact the design and deployment of the nationwide public safety broadband network ("PSBN"). Many of these issues are technically complex and will require responses that stretch state and local resources. Accordingly, just as state and local jurisdictions often rely on vendors and consultants to assist them with needs assessments, it is reasonable to expect that many jurisdictions will need similar assistance to fulfill their FirstNet consultation responsibilities and may rely on SLIGP funding to cover the cost of such support. MSI and, presumably, other vendors likely will be interested in supporting customers on such planning activities. It is not clear, however, whether such support potentially

[1] 77 Fed. Reg. 28857 (May 16, 2012).

[2] Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96, 126 Stat. 156 (2012) (codified at 47 U.S.C. § 1422).

could impact the ability of vendors to participate in FirstNet procurements. Therefore, MSI requests that NTIA provide clarification with respect to the following issues:

- Will a company be precluded from bidding (either as a prime or subcontractor) on FirstNet RFPs for the nationwide public safety broadband network due to a potential organizational conflict of interest (OCI), under Federal Acquisition Regulation ("FAR") Subpart 9.5 (or any other federal law or regulation) should that company participate in the planning grants as a vendor or consultant?
- Will any OCI regulations flow down from the planning grant recipients to vendors providing consultative services?
- If a company participates in the planning grants as a vendor, will any state or local laws or regulations preclude that company from participating in the planning grants and then bidding on subsequent FirstNet RFPs either as a prime or subcontractor?
- How will precedence be established between federal, state and local laws?

The expertise and knowledge of vendors and other private consultants and companies will be invaluable to developing the information needed by FirstNet to define its network policies in a timely manner. NTIA should make clear how vendors such as MSI can participate in this consultative process without invalidating their participation in future procurements.

As depicted in the recently released study by the State of Minnesota, a State Broadband Plan should begin with a comprehensive analytical study of user needs. The data collected should be gathered from face-to-face interviews and other means to survey all the key stakeholders within the state. Topics should include network operational requirements including service availability, service area, and capacity and throughput; device and usage requirements; and application requirements. The State should develop a detailed statement of network requirements that can form the foundation of FirstNet's and their state's RFP. Cellular operators in the state should be assessed to determine their suitability to support the state's operational and network requirements, including mission critical public safety requirements. The states should develop statewide budgetary designs including coverage maps, site selections, and backhaul

network designs. Finally, the states should provide a preliminary funding model that determines the estimated user fees based on the projected number of users and estimates capital and operating expenses. This upfront investment in planning will go a long way towards ensuring the ultimate viability and success of the FirstNet system. The States should be given adequate time to complete a thorough and comprehensive planning effort.

The RFI seeks comment on the data that states should compile for the consultation process with FirsNet. FirstNet's role is not dissimilar from that which MSI assumes when it is contracted to provide a statewide design. Thus, it is logical that that the same information that MSI asks states to collect would be useful for FirstNet.

It is assumed that FirstNet will need information from the states that is associated with the design of the Radio Access Network ("RAN"). In this regard, MSI typically asks for the following information from customers in preparation for developing a network design.

1. Information on all potential sites for the location of eNodeBs, backhaul (aggregation sites, rings, fiber POPs, *etc*.), and the operations center. The collected data needs to include: geographic coordinates, antenna height limitations, and desired equipment location (indoor or outdoor), and what type of utilities are available at the site.
2. Type and quantity of subscriber devices (mobile and portable) to be deployed by the jurisdiction.
3. The desired coverage areas (city boundaries, county boundaries, interstate highways, *etc*.).
4. Existing backhaul details such as a network diagram, interface requirements (Ethernet, MPLS, fiber transceiver, *etc*.), frequency plan, maximum bandwidth available bandwidth, expansion capabilities, and dish antenna size.

To help expedite information collection, FirstNET will likely need to define certain specifications that apply to all states such as: cell edge uplink and downlink data rates, percent coverage reliability, and the type of device (*e.g*. on-street mobile, on-street portable, in-building portable, urban, dense urban, *etc*.)

**Existing Public Safety Governance and Planning Authorities**

Most states have in place today a Statewide Interoperability Governing Board ("SIGB") or Statewide Interoperability Executive Committee ("SIEC") and all states have developed a Statewide Communications Interoperability Plan ("SCIP") as a result of the Public Safety Interoperable Communications ("PSIC") grant program. The National Governors Association ("NGA") Center for Best Practices released an Issue Brief on "Approaches for Statewide Interoperable Communications" in 2010 wherein it noted that 41 states have formed a SIGB for purposes of implementing the SCIP.[3] These governance structures have proven effective not only at deploying statewide radio systems but also at working with local jurisdictions to maximize participation on statewide systems.

MSI believes that these existing governance structures provide a logical framework to be reused for accelerating the PSBN. While some states utilize parallel resources and committees for voice and data, many states utilize a single SIEC in which to focus all statewide planning and oversight of public safety communications (voice and data). Most SIECs have efficient and effective governance for subcommittees to analyze and recommend appropriate technical and legislative action. It is not uncommon for the SIEC to oversee public safety needs for both voice and data.

In those states where this is not already the case, the existing governance entities can readily be adapted to address broadband implementation by establishing broadband subcommittees or working groups and by reviewing membership of the SIGB/SIEC to ensure that all key stakeholder groups from a broadband perspective are, in fact, represented. For

[3] *See* National Governors Association Center for Best Practices, Issue Brief: "Approaches for Statewide Interoperable Communications", http://www.nga.org/files/live/sites/NGA/files/pdf/1004INTEROPCOM.PDF (April 29, 2010).

example, it may be appropriate to ensure that other critical infrastructure providers, such as utilities, have an opportunity to provide input within the framework of these public safety governance structures.

It is also important for states to ensure that their SCIPs are updated to incorporate broadband deployment. The SCIP should reflect the technical and operational planning initiatives required to incorporate the PSBN into existing and planned interoperable voice and data networks.

**Leveraging Existing Infrastructure**

As Assistant Secretary Strickling recently noted at the APCO Broadband Summit:

> A second key direction of the legislation is that FirstNet cannot build a totally new infrastructure to deliver interoperable broadband services to public safety agencies. There simply is not enough money to build such an infrastructure. Instead, the law requires FirstNet to leverage, to the maximum extent possible, existing commercial wireless infrastructure, as well as existing state and local facilities, in the development of the network. In fact, the law expects that private industry will build and operate the network under contract and oversight by FirstNet.[4]

MSI agrees that leveraging existing infrastructure will be critical to the successful deployment of the PSBN and this is one of the reasons we have been advocating for waiver deployments, funded through BTOP or otherwise, to be allowed to continue to move forward as these additional funds can serve as an invaluable supplement to the $7 billion allocated under the Act for the nationwide network. In any case, based on our experience in deploying radio systems in many states, regions, counties, and metropolitan areas around the country, as well as our current experience as the grantee for the BayWEB BTOP project, we offer the following observations and suggestions relative to leveraging existing infrastructure.

[4] Keynote Remarks of Lawrence E. Strickling, Assistant Secretary of Commerce for Communications and Information, APCO Public Safety Broadband Summit, Washington, DC, May 14, 2012.

First, a process should be identified under which FirstNet can standardize and expedite all environmental assessments, zoning and permitting processes. Environmental approvals often require long lead times and cause delays in deployment of public safety networks. For example, the Department of Commerce Office of Inspector General noted that grantee progress under the PSIC program was slowed by the wait for required programmatic environmental assessment of projects.[5]

Second, FirstNet should provide a high-level architectural design that will serve as a baseline for the states to identify where resources (antenna sites and backhaul) should be sought. FirstNet should anticipate that progression from this baseline to a final configuration will be an iterative process and, therefore, FirstNet staff should be available to facilitate the design and modifications to it. FirstNet should also anticipate that multiple state and local jurisdiction asset owners will be involved in the refinement of the design and that decisions necessarily will be made that favor one party's interest over the other, and FirstNet resources will be required to facilitate a business and political compromise.

Third, an inventory of sites that potentially could be available to support the baseline design should be developed. This list should include those sites owned or controlled through leases by state and local government entities interested in allowing those sites to be used for the nationwide public safety broadband network. To facilitate this process, FirstNet should provide and distribute to the states written guidance so that a prospective site provider will know generally what will be required of the site provider and what to expect in return for allowing its sites to be used for the network. This guidance should address:

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[5] OIG Recovery Act Flash Report, *NTIA Should Apply Lessons Learned from Public Safety Interoperable Communications Program to Ensure Sound Management and Timely Execution of $4.7 Billion Broadband Technology Opportunities Program (ARR-19583),* rel. March 2009.

***Technical Considerations***

- What information is needed for the site provider to assess whether its sites likely will be qualified for use (*e.g.*, physical condition of each site and whether it is in "installation-ready" condition)?
  - Are there existing towers/structures that have adequate and available capacity for equipment installation?
  - If the site is not in installation-ready condition, what needs to be done to make it so?
  - Are the existing utilities adequate for the needs of the added equipment?
  - Is the existing backup power system adequate to the needs?
  - What competing or conflicting uses exist at the site?
  - What local government zoning, permitting, or environmental requirements or impediments exist?
  - There will be a need for analysis of electromagnetic compatibility with existing and planned future tenants. Each owner likely will have unique and individual requirements; these must be understood and accounted for in the process of qualifying a site for use.

***Financial Considerations:***

- Will the site provider be compensated for providing its site(s) and allowing them to be used for the network? If so, how much?

- Who will pay for the costs of site evaluation and qualification (*e.g.*, engineering analysis, structure analysis, environmental and permitting activities)?
- Who will pay costs for and own any capital investments for improving the Sites to make them installation ready?
- Who will pay costs for and own improvements to standby power and HVAC?
- Who will pay for any operating costs, such as utilities, property taxes, site maintenance and repair costs?
- Who will be responsible for and pay for environmental, zoning, and permitting costs?
- Who determines whether these costs are too high to allow qualification of the site (or should it be disqualified)?

The costs to prepare and maintain the sites must be known well in advance to allow the owner to establish and allocate a budget for the site. State and local governments operate on a fiscal year, and budget decisions may take months. Also, a substantive description of the

benefits of building and using the PSBN needs to be available to support the political decision to make a site available since state and local governments are not likely to contribute their sites and pay for attendant costs if they do not intend to become immediately a user on the network.

***Contractual Considerations:***

- What contract template (terms and conditions of use) will be established and how negotiable will the contracts be to accommodate local processes and needs? What regulations would apply? Would such procurements be considered a commercial transaction under FAR Part 12?
  - The contract template must address the conditions of site use.
  - The site qualification process must be delineated.
  - Who handles environmental, zoning, and permitting activities and costs?
  - The length of the term of use must be specified.
  - What situations can disrupt or cause the termination of the use?
  - What happens on termination of the contract?
  - Who pays what costs before and after termination?
  - What rent will be paid to the site provider, if any?
  - Risk allocation provisions such as insurance, indemnity, limitations of liability; etc. must be clearly delineated.
  - Will Possessory Interest taxes be assessed? Who is responsible to pay them?
  - A requirement that the federal government receive security or other interests in the site improvements or other real estate likely will remove many potential sites from consideration because local governments cannot or will not agree to such interests. The federal government should have contractual rights concerning the site improvements, but not a lien or security interest.
  - Are there any restrictions as to specific contractors who are approved to perform work on the site? How can this be accommodated in a competitive procurement?
  - What are the site owner's responsibilities and rights in the event of an emergency?
  - How will owner-funded improvements be treated (e.g., the owner may want to pay for extending the height of the tower beyond what is needed for the LTE system)?
  - Will the parties share ownership of certain asset (e.g., the sharing of a microwave dish or joint funding of a tower)?

***Site Access Considerations:***

Accessibility to the sites must be defined and agreed upon. For example, procedures will be required on how to gain routine and emergency access, as sites are often located in secure areas having special access restrictions.

In addition to providing an inventory of sites, states should also be required to provide FirstNet with an inventory of:

- likely users of the FirstNet network including current cost and loading information related their existing data services;
- the existing Public Safety Answering Points within the state and likely need for backhaul connectivity to the core;
- the existing Public Safety Application Networks within the state and likely need for backhaul connectivity to the core;
- the existing Public Safety applications throughput loading on their existing data networks that are likely to be transferred to the FirstNet system; and
- the existing Narrowband 700 MHz users in the broadband spectrum that will need to be relocated.

To this end, NTIA should make clear that SLIGP funds would be available so that states could study, develop, and document a projected use profile for state and local agencies. It will be critical for FirstNet to know the types of unique user groups and the use cases each group will bring to the network and to understand the applications they will use in different settings (*i.e.,* portable, mobile, outdoor/indoor, etc). This information will affect network design and will be useful to help determine the suitability of the existing physical assets.

The inventories that are developed as a result of these planning activities will be useful only to the extent that this infrastructure can be incorporated into the RFPs developed by FirstNet. The key will be making qualified sites and backhaul facilities available for use on reasonable terms. In this regard, MSI believes there is merit in allowing states to serve as clearinghouses for obtaining access to resources such as towers and backhaul networks. This

might also help address issues arising from the systemic relationship of site and backhaul combinations (*e.g.*, site A will be useable in the system but only if site B is altered from its existing configuration which may impact current users).

**State and Local Implementation Grant Activities**

The RFI seeks comment on some of the best practices from existing grant programs that NTIA should consider adopting for the SLIGP. MSI recommends that NTIA consider using volunteer peer reviewers in the planning grant process as is done in the PSIC program. MSI believes that a peer review process provides a means for objective independent review of applications and helps to reduce any potential biases.

A peer review should be performed by a panel of subject matter experts that score the application using predetermined criteria. Reviewers should have similar qualifications to those necessary for the FirstNet Board with relevant expertise, diverse backgrounds, regions and experience. The pool of reviewers could be drawn from the list of Board candidates that do not receive an appointment.

**State Funding and Performance Requirements**

NTIA notes that the Act gives the Assistant Secretary the authority to waive the matching requirement if good cause is shown and the waiver is in the public interest. In this connection, MSI urges NTIA to clarify that the match requirement may be satisfied on an in-kind basis without a waiver. Although the Act is not explicit on this point, neither does it explicitly state that a cash match is required. This interpretation would be consistent with NTIA's

implementation of the PSIC program. In that case, the underlying statute was also silent on the issue of cash versus in-kind, but NTIA's grant guidance explicitly allows for in-kind matches.[6]

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MSI appreciates the NTIA's consideration of these comments. We look forward to working further with NTIA to ensure that the implementation of the SLIGP and the establishment of FirstNet leads to the successful development of a nationwide public safety broadband network.

Respectfully Submitted,

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[6] *See* Pub. L. No. 109-171, § 3006(c), 120 Stat. at 24 and PSIC grant guidance at: http://www.ntia.doc.gov/legacy/psic/PSICguidance_081607.pdf.