

**Response of RCC Consultants, Inc., to the Request for Information (RIN: 0660-XC001) of
the National Telecommunications and Information Administration Respecting the
Development of the State and Local Implementation Grant Program for the Nationwide
Public Safety Broadband Network**

NTIA Docket No: 120509050-1050-01



Executive Summary

RCC Consultants, Inc. (“RCC”), responds to the May 14, 2012, Request for Information (the “RFI”) of the National Telecommunications and Information Administration, U.S. Department of Commerce (“NTIA”) seeking public comment on various issues relating to the development of the state and local implementation grant program, which NTIA must establish, pursuant to the Middle Class Tax Relief and Job Creation Act of 2012 to assist state and local governments in planning for a single, nationwide interoperable public safety broadband network (the “PSBN”). RCC response is somewhat broader than might be strictly required or expected, but RCC believes, the RFI provides a useful and proper occasion for the development of a number of issues and ideas that bear upon the PSBN undertaking. The issues and ideas explored by RCC in this response include:

- The critical success factors that determine the achievement of the statutory objectives for the PSBN;
- The observation, made with the intention of offering a friendly and helpful critique, that NTIA, in its understandable and praiseworthy effort to move the PSBN forward as promptly as possible, may have gotten a bit ahead of itself and may have exceeded, in certain respects, its statutory authority;
- Positive suggestions for actions that might be explored or undertaken by FirstNet or NTIA, as appropriate, to enhance the probability of success of the PSBN, which is a universally-shared goal of all those, including the members of the RCC PSBN Working Group, who are committed to effective public safety communications; and
- The submission that the exercise and execution by states or territories of their right under the act to build their own radio access network (a “RAN”) in lieu of the RAN to be offered by FirstNet within the borders of a state or territory can, in certain circumstances, make a critical positive contribution to the full and effective implementation of the PSBN.

In this response, RCC provides direct answers to the questions posed in the RFI in a manner intended to make a contribution to the process pursuant to which the PSBN will be implemented.

I. Background

On or about May 14, 2012, the National Telecommunications and Information Administration, U.S. Department of Commerce (“NTIA”), issued a Request for Information (the “RFI”) seeking public comment on various issues relating to the development of the state and local implementation grant program, which NTIA must establish, pursuant to the Middle Class Tax Relief and Job Creation Act of 2012 (the “Act”),¹ to assist state and local governments in planning for a single, nationwide interoperable public safety broadband network (the “PSBN”). NTIA has indicated that it intends to use the input from this process to inform the development of programmatic requirements to govern the state and local planning grants program.

RCC Consultants, Inc. (“RCC”), hereby responds to the RFI² and seeks to make a contribution to the process to be employed to create the PSBN pursuant to the Act. RCC thanks NTIA for the opportunity to present RCC’s views and hopes that those views engage the interest of NTIA and, in due course, FirstNet and the other stakeholders in this grand, important, and challenging shared undertaking. This response should be read in the context of RCC’s unqualified support for the PSBN and for the widest possible participation therein.

There is much to be appreciated in the effort made by NTIA in preparing and issuing the RFI. The RFI raises many serious and thought-provoking questions that must be addressed. RCC assumes that most of the issues raised will be for FirstNet to consider in the exercise of its own independent judgment and authority, as NTIA representatives have stated in several recent public forums. NTIA and FirstNet do already or will soon understand that there are traditional tensions between federal agencies and state agencies, and between state agencies and county or regional agencies, and between county/regional agencies and local public safety agencies in matters relating to public safety communications and operations. Such tensions were very evident during Hurricane Katrina and in other major events before and after. These tensions have existed for many years, and must be appreciated and properly handled for the over-riding objective of a successful PSBN implementation and wide usage thereof.

The exercise by FirstNet of its own authority is, as RCC later explains, of critical importance to the success of the PSBN. One of those challenges facing FirstNet will be to maintain its independence, even from its parent agency NTIA. One of the questions raised in this response is whether NTIA, although acting in the utmost good faith to move the development of the PSBN along while FirstNet is in formation, has, in the RFI, inadvertently acted in a manner that may reasonably be viewed as having encroached upon the authority of FirstNet and the states and territories under the Act.

While RCC identifies in this response the specific bases for RCC’s concerns, RCC does not believe that those concerns are in any sense irremediable or that those concerns compel or suggest

¹ Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96, 126 Stat. 156 (2012)

² The RFI was published in the Federal Register of May 16, 2012 (77 FR (No. 95) at pp. 28857-28860).

any fundamental criticism of NTIA, its work, its role, or its intentions or that the issues raised will not be addressed by NTIA as those concerned in the PSBN adjust to working with one another and their respective roles and responsibilities.

RCC would, of course, have preferred that it was not necessary or proper to raise the issue of authority in responding to the RFI, but RCC believes that all concerned with the success of the PSBN owe a duty of truthfulness and candor to one another and that RCC's raising the issue of authority is, in its view, both necessary and proper. RCC sincerely hopes that NTIA will understand and appreciate RCC's raising the issue of authority as it is intended – strictly as constructive criticism. RCC believes that the early identification of concerns in relation to the process for the development of the PSBN is useful and hopes that RCC's good purpose and good faith in so doing will be understood and acknowledged just as RCC understands and acknowledges the good purposes and good faith of NTIA in issuing the RFI. RCC expects to be active on behalf of its clients and, perhaps, others in relation to the PSBN and looks forward to working closely with NTIA, FirstNet, and the Federal Communications Commission (the "FCC") in their respective capacities as provided by the Act.

RCC unreservedly acknowledges, accepts, and has no reservations respecting the important role provided for NTIA under the Act. RCC appreciates the magnitude of the task faced by NTIA and FirstNet in relation to the realization of the Act's vision for the PSBN. RCC's appreciation of the daunting tasks that lie ahead for NTIA and FirstNet is grounded in RCC's sense of "been there, done that" as a result of having been active in the public safety communication industry for 29 years.

RCC personnel are unique among their consulting peers because they have had direct responsibility for the design, construction, operation, maintenance, and financing of a nationwide wireless data network comprising more than 2,000 sites (RAM Mobile Data). RCC personnel have a far more than theoretical appreciation of what the development of a nationwide mobile data network involves. No one without that responsibility and consequent experience can truly understand the myriad daunting tasks involved.

Those who have never built such a network before may, for example, find comfort in site databases and believe a path to a buildable design may be derived from that source. In RCC's experience with the RAM Mobile Data Network, actual site availability and suitability is a far cry from the appearances created by stored databases, which are inevitably outdated, incomplete, and sometimes misleading. RCC hopes that NTIA and FirstNet will, because of RCC's experience, consider and value the perspective of RCC in relation to the PSBN project. RCC assures NTIA and FirstNet of RCC's continuing support for the creation of the PSBN pursuant to the Act.

RCC understands that a purpose of the Act is to enable, for the first time, police officers, fire fighters, emergency medical service professionals, and other public safety officials to communicate with each other across agencies and jurisdictions on a nationwide basis using broadband data. RCC supports that purpose unqualifiedly and supports the work to be undertaken

by FirstNet to achieve that purpose. RCC believes that FirstNet, once up and operating, will face numerous challenges and hopes that this response will be viewed as a useful, if small, contribution to FirstNet as that new independent agency addresses those challenges.

II. The Qualifications of RCC as a Respondent to the RFI

RCC is qualified to contribute to the process to be employed to create the PSBN pursuant to the Act because RCC has each and all of the qualifications referred to in Section 6204(2)(B)(i)(I-IV) of the Act, at least one of which qualifications must be possessed by each of the persons to be appointed as members of the board of directors of FirstNet:

- ***Public safety expertise – Knowledge and experience in federal, state, local, and tribal public safety or emergency response:*** RCC has a 29-year history of providing first class telecommunications engineering services to public safety agencies and has gained a degree of experience and understanding of public safety operations and emergency response. RCC has completed more than 4,000 projects for more than 1,500 clients, more engagements in relation to public safety radio projects, including numerous statewide projects, than any other independent telecommunications consultancy. RCC has very extensive experience in public safety 9-1-1 and dispatch operations as well as computer-aided dispatch and public safety mobile data. The professional staff of RCC includes personnel who have direct experience as first responders and as emergency management personnel and who thus have held both front line and leadership positions.

- ***Technical expertise – Technical expertise and fluency regarding broadband communications, including public safety communications:*** RCC is engaged in several broadband communications projects, including projects for Charlotte, NC, the State of West Virginia, and the Commonwealth of Pennsylvania. RCC has devoted substantial resources to the development of:
 - A comprehensive, robust, and well-informed strategy for states and territories to address the public safety broadband opportunity under the Act;

 - RCC has added LTE to its ComSite suite of software tools to allow the ability to predict and model propagation, capacity, and reliability and to model and plan backhaul links from the eNodeB sites³; and

 - The processes, methodologies, tools, and templates necessary or useful in the

³ ComSite LTE focuses on analyzing how public safety applications will perform under typical and emergency conditions. ComSite LTE bridges available sites, existing backhaul, and detailed user traffic down to a department level to determine the minimum infrastructure required. By using a traffic distribution layer, digital elevation, and urbanization (land use) data, ComSite LTE seeks to calculate the maximum permissible data rate at any one location within the service area for the uplink and downlink channels. One of the key differentiators in ComSite LTE is that downlink and uplink interference are computed in order to predict more accurately how LTE performs given the twenty-nine modulating coding schemes defined under the 3GPP standards. ComSite LTE takes into account Hybrid Automatic Repeat Request (HARQ) for improvements in expected signal to noise ratios to meet a 1% packet error rate after subsequent successful transmission attempts. With its unique capability of analyzing thousands of potential sites over large geographic areas, ComSite LTE provides reason for its becoming the tool of choice to perform statewide broadband systems designs for maximum coverage and minimum infrastructure costs for maximum throughput and the very high level of reliability expected by first responders.

implementation of that strategy.

The RCC approach to network design is unique because: (i) it has its origins in mission critical public safety communications rather than in revenue-producing public carrier operations, (ii) it focuses upon the critical combination of wireless coverage and capacity and wireless and backhaul reliability which are applied in a different manner in public safety communications from the manner in which they are applied in public carrier services, which are driven by return on investment rather than protection of the public, (iii) it addresses the connection between wireless network design and actual traffic in the wireless network, on the one hand, and its consequences in terms of backhaul requirements, on the other and, thereby, provides a comprehensive view of capacity, which may be an underappreciated issue in LTE network design, and (iv) it addresses the fact that coverage in an LTE network is not an assurance of either adequate capacity or necessary reliability.

- ***Network expertise – Expertise in building, deploying, and operating commercial telecommunications networks:*** RCC designed, implemented, optimized, and supported the operations of the first nationwide public shared wireless data network in the U.S. and deployed the first public shared wireless data networks in the U.K. and Australia (the “RAM Mobile Data Networks”).⁴ The RAM Mobile Data Networks were the first shared public mobile data networks in the world that supported (i) multiple applications and devices using an open air interface and data structure (following the seven-layer OSI model) that enabled diverse vendors to provide devices and applications which offered users wireless access to data, images, and location information, (ii) the now near-universal practice of wireless email or “texting,” and (iii) diverse subscribers drawn from public safety, public utilities, and commercial customers. No other public safety consultancy employs staff personnel with this level of wireless data network expertise.

- ***Financial expertise – Expertise in financing and funding telecommunications networks:*** RCC personnel have very substantial experience in the financing of telecommunications networks and in partnership development for the implementation of telecommunications networks, including the RAM Mobile Data Networks, the Detroit, Flint, Lansing, and Toledo Cellular Telephone Companies (jointly implemented and coordinated in financing), the Houston Cellular Telephone Company, and the Honolulu Cellular Telephone Company. In fact, RCC personnel:
 - Created a form of financing (“pay-as-you-grow”) that was widely employed to enable the development of cellular networks by non-wireline licensees; and

 - Provided the financial, commercial, practical, and legal solutions to the competition

⁴ Very few independent consultants combine public safety experience with experience in the program management of the deployment and operation of a nationwide wireless data network. RCC is likely unique in this respect. See also Section 6205(b)(1) of the Act for the relevance of that combination of skills.

among hundreds of non-wireline applicants for cellular telephone licenses in the 30th through 90th largest markets and thereby solved a major problem for the FCC, which approved and acted to facilitate the approach developed by RCC personnel.

In short, there is not one material aspect of the development of the PSBN as to which RCC does not have deep experience.

The range of experience indispensable, necessary, or useful in the development of the PSBN includes:

- Needs assessments;
- Telecommunications strategy development;
- Tools and software development for public safety telecommunications;
- Asset inventories and related utility analysis;
- Regulatory and legal issues;
- Project management;
- Systems integration;
- Site planning;
- Construction management and owner's representative supervision;
- Site development, including green field and difficult to access site development;
- Site suitability analysis;
- Site leasing;
- Tower surveys and suitability analysis;
- Power supply and grounding;
- Environmental and zoning clearance;
- Propagation analysis;

- Propagation software tools;
- System design and specification;
- Backhaul design and specification;
- Backhaul modeling using software tools;
- Microwave path clearing;
- Cable installation;
- Interoperability planning;
- System procurement and contract negotiation;
- Financial analysis;
- Tariff analysis and design;
- Billing system design;
- Customer service strategy and implementation;
- User connectivity support;
- Project financing and partnership formation;
- Factory staging and testing;
- System implementation;
- System Acceptance testing;
- Drive testing to verify propagation and system performance;
- System optimization;
- System monitoring and maintenance;
- Network management;

- Computer-aided dispatch operations and 9-1-1 operations and their integration with radio systems;
- Telecommunications entrepreneurship and industry leadership;
- Analysis of troubled projects;
- Corrective measures in troubled projects; and
- Litigation support in relation to telecommunications issues.

This range of activity may appear beyond the requirements for the building of the PSBN, but, when the problems arise, and they will arise, it will be necessary to call upon those who have actually gotten their hands dirty in places ranging from operations centers to remote and barely accessible sites while seeking to address taxing problems and those who have stayed up night after night to complete financings and create partnerships necessary for the development of major telecommunications undertakings.

That range of experience constitutes a critical aspect of the overall qualifications of RCC and, together with RCC's long-established commitment to effective public safety communications and RCC's established willingness to question the effectiveness, equity, wisdom, or fairness of certain programs affecting public safety, provides RCC a certain standing to examine the RFI and make positive suggestions in relation thereto. RCC sincerely hopes that other concerned parties, including RCC's competitors in the public safety telecommunications consulting field, will also make an effort to examine the RFI and bring such insights as their own experience offers to improve the process to be employed to create the PSBN pursuant to the Act.

III. Introduction of the Principles and Analysis Applied in the Development of this Response

This response is principally grounded in RCC's understanding and belief respecting why some major telecommunications projects are, or are on the path to being, great successes, including many statewide, regional, and major metropolitan area voice and data networks, in many of which RCC was directly involved and why some other major telecommunications projects have not lived up to expectations, have been materially delayed or curtailed in scope or have actually failed. It simply cannot be denied that:

- A telecommunications project of the magnitude of the PSBN is inherently risky; or
- The management of that risk cannot be effective in the absence of actual prior experience in the implementation and operation of public safety networks.

FirstNet will be assembled with personnel from diverse backgrounds who may not have worked together before and who will require time to form working relationships, establish policies, and institute best practices. FirstNet, once it is standing, will, like any other special-purpose newly-formed entity, be an agency without a track record. FirstNet will have no operating history, no institutional record of accomplishment, and no institutional experience with the implementation of public safety telecommunications networks. FirstNet is the creation of the Act, and, of course, legislative enactments are not a substitute for effective operations or actual experience. FirstNet will have to look to the experience of its directors and staff and to external sources of expertise and experience in order to support and bolster the skills and experience of FirstNet personnel, and FirstNet's need to do so implies no adverse reflection upon FirstNet. Indeed, the Act anticipates FirstNet's seeking external support.⁵

FirstNet is a legislative creation, and all well-intentioned parties must seek to overcome FirstNet's short-term limitations by contributing sound advice and making their experience available so as to reduce project risk in relation to the PSBN. RCC's own support for FirstNet is, as already noted, unqualified, and that support has as its basis in RCC's belief that the implementation of the PSBN is critical to the long-term effectiveness of public safety telecommunications to support first responders and other critical public safety officers. Support for the PSBN means support for FirstNet.

Still, project risk remains a serious issue, and the federal government's experience with the implementation of nationwide and more limited wireless telecommunications networks is not uniformly positive (*e.g.*, the Integrated Wireless Network of the Department of Justice ["DoJ"] [known as "IWN," which despite two attempts has never realized the original vision of a nationwide network] and Capitol Police radio system). It will be the responsibility of and

⁵ In this regard, see: Section 6205 and Section 6206(b)(4)(A) of the Act. Particularly important is Section 6205(b) (1), which provides that FirstNet may select "a program manager to carry out certain of the duties and responsibilities of deploying and operating" the PSBN.

challenge to FirstNet to make sure that past is not prologue, and that responsibility and challenge carry with them the necessity of accountability for the fate of the PSBN project. Federal agencies are not alone in experiencing difficulties with public safety radio projects. Certain states have experienced serious problems with statewide public safety network implementations (*e.g.*, New York's Statewide Wireless Network [known as "SWN"] and Oregon's "OWIN" project [the Oregon Wireless Integrated Network]). While RCC was not involved in supporting those projects, RCC has been in a position, in two of those cases, to observe and study the underlying problems closely and to draw certain conclusions, based upon those failed or failing projects and RCC's broader experience with a large number of successful projects. Those conclusions may be understood as RCC's identification of the critical success factors (sometimes referred to as "CSFs") that, to a large degree, determine the fate of significant and inherently risky public safety telecommunications projects.

This response constitutes, in part, a plea for a form of federal and state/territory cooperation that recognizes that the success of the PSBN depends upon the following high-level critical success factors (and other such CSFs, but which are not necessarily relevant in the context of the RFI):

- **Providing a network that meets the assessed and substantially local needs of public safety users to the maximum practical extent given resource constraints;**
- **Addressing resource constraints such that the assessed needs of users are very substantially met in fact;**
- **Implementing a network that offers the coverage, capacity, cyber security, and reliability such that reasonable expectations for the operation of the network under stress are substantially met;**
- **Maximizing the actual acceptance and use of the network and its effective integration into public safety operations both of a routine character and major event-triggered emergency responses;**
- **Achieving sustainability and continuous improvement of the network to address any needs unmet by the initial deployment and to meet expanding and changing needs;**
- **Having a clearly defined, easy to understand and implement, functional governance model where all stakeholders understand how their voices are to be heard, their rights and responsibilities, and the means by which decisions are made and executed with associated accountability are crystal clear and properly enforced;**
- **Obtaining a substantial degree of buy-in by all concerned;**

- **Achieving a general sense and acceptance that the decision process for the project is independent of improper influence, fair, and equitable in addressing the concerns and interests of all stakeholders;**
- **Fostering a belief that decisions in relation to the project were independently arrived at by un-conflicted parties having freedom of choices based upon broad input and wise judgment, expert independent advice, and all reasonably required information, and a high degree of candor respecting resource constraints and their consequences in terms of expectations for network performance;**
- **Resolving uncertainty over continuing operating expenses and the ability of a subscriber to withdraw from the network at will or at the end of a specified term; and**
- **Developing mutual trust between federal agencies and the states and territories and acknowledgment of the need for truly independent action and decision-making by states and territories.**

Certain CSFs bear directly upon FirstNet, including:

- **FirstNet’s continuing validation of its independent status and its acting at all times so as to be seen to be pursuing the development of the PSBN independently and not as a part of or under the direction of the federal bureaucracy;**
- **FirstNet’s building confidence that its highest, indeed sole, priority is the development of the PSBN and that, while FirstNet recognizes the political compromises bearing upon the PSBN under the Act, FirstNet will, within the scope of its authority, protect the PSBN against its being used for any purpose other than to enable, for the first time, police officers, fire fighters, emergency medical service professionals, and other public safety officials to communicate with each other across agencies and jurisdictions on a nationwide basis;**
- **FirstNet’s acknowledging that the greatest potential value of the PSBN is to the states and territories and their constituent political subdivisions, agencies, and other groups and, potentially, federal government users and that, therefore, the only or principal measure of the PSBN is the extent to which that network meets the assessed needs of those users and that the best evidence of those assessed needs is evidence from those users;**
- **FirstNet’s understanding, given reality in practice, that the concerns of states and territories and their independence as constitutional entities must be addressed directly and effectively within the applicable resource constraints;**

- **FirstNet’s further understanding that concerned federal agencies neither exceed nor be seen to be exceeding their respective delegated authority under the Act;**
- **FirstNet’s recognizing its need for independent advice, *i.e.*, advice from sources other than federal agencies, but in addition thereto, not in lieu thereof;**
- **FirstNet’s recognizing the need for and availability of independent advice to the states and territories, *i.e.*, advice not obtained from federal sources or sources not seen to be independent of NTIA and FirstNet or the federal government generally;**
- **FirstNet’s demonstrating its receptiveness to suggestions from states and territories regarding their assessment of their needs in relation to public safety broadband and FirstNet’s willingness and ability to address those suggestions in fact and in substance;**
- **FirstNet’s providing states and territories all information required by states and territories to make the decisions required of them under the Act;**
- **FirstNet’s providing states and territories all information required by states and territories to assess their relative treatment by FirstNet in relation to the nature and extent of the RAN proposed to be provided within the borders of each state or territory by FirstNet;**
- **FirstNet’s putting a policy into effect in practice that makes real and practically exercisable the right of states and territories to opt out of the proposed FirstNet RAN where that policy leaves a free choice to states and territories and seeks to influence such choice only:**
 - **By being responsive in the proposal for a RAN by FirstNet to the assessed needs of states and territories in relation to public safety broadband; and**
 - **Not by erecting barriers to opting out unrelated to an independent analysis on the merits of the choice between accepting the proposed FirstNet RAN and a state’s or territory’s providing a RAN alternative thereto; and**
- **FirstNet’s being very candid respecting resource constraints and the effect of those resource constraints upon:**
 - **The scope and scale of the RANs that FirstNet can realistically offer to the states and territories at the current level of funding under the Act; and**
 - **Specifically, whether the coverage, capacity, and reliability of the RANs that**

FirstNet can realistically offer to the states and territories at the current level of funding under the Act can be in any manner comparable to the coverage, capacity, and reliability of the public safety narrowband trunked radio systems upon which first responders today are entirely dependent for public safety operations.⁶

RCC believes and respectfully submits that, in certain respects, the RFI does not, for the reasons hereinafter explained in reasonable detail, adequately reflect the above-enumerated relevant critical success factors.

RCC does not in any manner doubt the substantial effort made by or the good faith and best intentions of NTIA in the development of the RFI. RCC hopes and believes that NTIA and FirstNet will be open to the serious consideration of good faith, well-intentioned suggestions in relation to the RFI from all parties having deep relevant experience.

RCC places substantial weight upon assuring the reality and practical availability of the right to opt out of the FirstNet-proposed RAN. RCC does not favor or disfavor or encourage or discourage the making of opt out decisions. RCC believes that all decisions respecting whether to opt out or not must be made independently on a case by case basis by states and territories. RCC has no interest in either maximizing or minimizing opt outs *per se*, but does have a great interest in seeing to it that:

- **The needs and requirements of public safety users in relation to public safety broadband are met, whether through FirstNet entirely (RAN and LTE Core) or a RAN alternative and the FirstNet LTE Core; and**
- **States and territories remain committed to the concept of the PSBN (despite the fact that states and territories have no obligation under the Act to support or utilize the PSBN) and participate in and widely utilize the PSBN.**

RCC firmly believes that (i) there may be greater adoption of the PSBN if the ability to opt out of FirstNet-provided RANs is seen as a reality by states and territories, and (ii) the reality of the opt out alternative must be preserved to avoid any sense that states and territories, despite the terms of the Act, never really had the legal ability to provide an alternative RAN where in their good faith judgment:

⁶ RCC well understands the very exacting public safety requirements in relation to voice and data transmissions. RCC is concerned that the nationwide interoperable public safety broadband network may be oversold if caution is not exercised in setting expectations therefor, particularly in relation to mission critical voice communications. The overselling of the nationwide interoperable public safety broadband network could result in not upgrading or replacing existing public safety network in the belief, which RCC considers unrealistic, that the nationwide broadband network will render such critical upgrades and replacements unnecessary. The effect of such belief may be unwisely to defer or avoid such upgrades and replacements and, in fact, endanger first responders reliant upon networks that should have been upgraded or replaced as well as the general public.

- **The RAN proposed by FirstNet does not meet assessed needs, the state or territory could, from a financial, technical, and operational standpoint, provide a RAN that met assessed needs effectively; and**
- **Assurances could be given of compliance with governing technical standards and of full interoperability with FirstNet facilities.**

RCC believes that resource limitations may make the FirstNet-proposed RANs' meeting the assessed needs of some states and territories unlikely.⁷ In those circumstances, those states and territories may be willing and able with federal grant funding and their own financial resources to implement an alternative RAN to that of FirstNet, and that alternative RAN may, in fact, improve the coverage and capacity of the PSBN and thereby improve the rate of adoption by public safety users and the success of the project overall.⁸

Most people in the industry believe that seven billion dollars, when applied to the development of the PSBN, will not be sufficient. The need to supplement that large sum, whether by additional federal appropriations, by state or territorial RAN provision, or RAN provision by public private partnerships at the state or regional level, state or territorial contribution, or of relevant and useful facilities, or a combination of those means seems very likely. In these circumstances, the careful management of state/territory and federal relations is crucial as is the management of expectations of states and territories in regard to the scale and scope of the RANs that can be realistically proposed by FirstNet.

⁷ NTIA's own concerns in this respect are reflected in the keynote remarks of Lawrence E. Strickling, Assistant Secretary of Commerce for Communications and Information, at the APCO Public Safety Broadband Summit in May of this year.

⁸ It is not clear that this possibility was considered or adequately considered before NTIA's issuance of seven letters to grantees under an earlier broadband program, for which see:

Adams County Communications Center, Inc. <http://www2.ntia.doc.gov/files/grantees/20120511095538760.pdf> ;

City of Charlotte <http://www2.ntia.doc.gov/files/grantees/20120511095904533.pdf> ;

Executive Office of the State of Mississippi <http://www2.ntia.doc.gov/files/grantees/20120511095932888.pdf> ;

Los Angeles Regional Interoperable Communications System Authority
<http://www2.ntia.doc.gov/files/grantees/20120511094609720.pdf> ;

Motorola Solutions, Inc. <http://www2.ntia.doc.gov/files/grantees/20120511095833401.pdf> ;

New Jersey Department of Treasury <http://www2.ntia.doc.gov/files/grantees/20120511095756744.pdf> ; and

New Mexico Department of Information Technology
<http://www2.ntia.doc.gov/files/grantees/20120511095259281.pdf> .

The foregoing letters, while understandable in terms of the imperative of compatibility, will tend to reduce in importance the contributions that states and territories and their constituent subdivisions and agencies may be required, in at least some instances, to make, if the PSBN is to satisfy the assessed needs of certain states and territories.

Any combination of the creation of unrealistic expectations for FirstNet-provided RANs and improper restriction on opting out is a sure formula for limiting the degree of success of the PSBN. A decision to opt out is simply not an adverse development from the standpoint of the creation of the PSBN.

As previously noted, RCC supports unqualifiedly the development of the PSBN and the broadest possible participation therein, and, accordingly, the suggestions respectfully made and the criticisms respectfully offered in this response to the RFI should be read in the context of RCC's support for that network and that broad participation.

Respecting opting out in the sense provided for in the Act, in the sense of not supporting the proposed network by making useful facilities available, and in the broader sense of abandoning the PSBN, the following principles should be applicable:

- **The only legitimate means to discourage opt outs which are compliant with the requirements of the Act is for FirstNet to provide a RAN that meets assessed needs more effectively than any RAN alternative that could practically be provided by the state or territory concerned;**
- **The only legitimate means to discourage states and territories from abandoning the PSBN is for FirstNet to provide a RAN that meets assessed needs of the state or territory as communicated to FirstNet in a manner that reflects a good faith effort, subject to resource constraints;**
- **A state or territory neither expresses support for nor, in fact, provides effective support to the PSBN by not opting out where a RAN alternative to the FirstNet-proposed RAN could reasonably and practically be provided by the state or territory and where that RAN alternative would materially more effectively meet the assessed needs of that state or territory in relation to public safety broadband; and**
- **A state or territory both expresses strong support for and, in fact, provides effective support to the PSBN by opting out where that state or territory can reasonably and practically provide and does actually provide a RAN alternative to the FirstNet-proposed RAN and where that RAN alternative would materially more effectively meet the assessed needs of that state or territory in relation to public safety broadband.**

RCC is mindful of the complications introduced in the development of the PSBN by the inclusion of RANs provided by states or territories. While RCC is aware of those complications and does not seek to minimize them, in RCC's view, the materiality of those complications in relation to the overall success of PSBN project is minute by comparison with the material adverse effect upon that project's achieving its objectives if and to the

extent a compulsion for FirstNet-provided RANs results in:

- **Assessed needs' not being met;**
- **Assessed needs' not being met to the full extent reasonable and practical; or**
- **Assessed needs' not being met more effectively by a reasonable and practical RAN alternative to the FirstNet-proposed RAN.**

IV. The Specific Concerns and Responses of RCC

The RFI is entitled “**Development of the State and Local Implementation Grant Program for the Nationwide Public Safety Broadband Network.**” Because the Act charges NTIA with establishing a grant program to assist State, regional, tribal, and local jurisdictions with identifying, planning, and implementing the most efficient and effective means to use and integrate the infrastructure, equipment, and other architecture associated with the nationwide PSBN to satisfy the wireless and data services needs of their jurisdiction,⁹ an RFI from NTIA would implicate no fundamental questions if that RFI were limited in scope to the subject matter of its title.

A. General Concerns

At every level, the Act requires interaction between NTIA, FirstNet, and the FCC, on the one hand, and states and territories, on the other. The roles of the federal entities or agencies, on the one hand, and the roles of states and territories and their constituent political subdivisions, agencies, and organizations, on the other, must be integrated in as frictionless a fashion as possible if the goal of the Act is to be effectively met.

The creation of the PSBN is an enormous challenge from a technical, operational, and financial standpoint. The challenge of creating the single, nationwide interoperable public safety broadband network should not be magnified by introducing essentially legal and political problems though, what RCC submits may be, an inadvertent unauthorized involvement of NTIA in areas of decision-making reserved to the states and territories under the Act.

RCC respectfully submits that the authority of NTIA under the Act is, in fact, both quite important and quite limited. The Act does not delegate to NTIA any general supervisory power over the implementation of the PSBN. The widest powers, in this respect, are delegated to FirstNet, which under Section 6204(a) of the Act “is established as an independent authority within the NTIA.” (Emphasis supplied.)

RCC further respectfully submits that the fact that FirstNet is in the process of formation does not augment the authority of NTIA.

In the context of the RFI, the authority of NTIA (or the “Assistant Secretary” as defined in the Act) is limited essentially to that delegated under Section 6302(a)-(d) of the Act. Nowhere in those provisions, all of which relate to grant funding, is there any authorization granted to NTIA or the Assistant Secretary to explore generally issues related to the development of the PSBN. Indeed, the powers granted to NTIA and the Assistant Secretary under those provisions are not granted exclusively to NTIA or the Assistant Secretary. The establishment of the grant program is to be effected in consultation with FirstNet under Section 6302(a), and the setting of programmatic requirements for the grant program is to be accomplished in consultation with FirstNet under section 6302(c) of the Act.

⁹ Section 6206(b)(10) of the Act

The national news media have reported numerous lawsuits and political disputes regarding mandates and other programs (e.g., the federal healthcare legislation challenged by certain states), and there is no reason to inject the potential for adverse state or territorial reaction by NTIA's not recognizing the independence and independent roles of states and territories under the Act. RCC believes, based upon communications with several states, that states and territories are generally supportive of the creation of the PSBN. However, some states have expressed a concern to RCC about actions which might erode the established roles of states and territories. Moreover, agencies of states and territories and their political and other subdivisions have truly vast experience in state and local public safety communications that is very valuable in achieving the success of the PSBN.

In these circumstances, it is reasonable to assume that states and territories and their political and other subdivisions, which have long been able to organize themselves for major public safety undertakings and which have long ago demonstrated their ability to have needs assessments, asset inventories, and system designs prepared in relation to such undertakings, can meet their responsibilities in these respects (except for those particular issues as to which NTIA or FirstNet have specific authority).

On the critical issues of interoperability and standardization, states and territories and their political and other subdivisions have made significant strides, and, as reported by DHS OEC,¹⁰ of more than 2,500 counties reporting, 90% can demonstrate interoperability, and 66% to 85% can demonstrate regular interoperability. The creative interoperability arrangements established in the National Capital Region and surrounding areas and in other locations across the country are the direct results of undertakings at the state, county, and municipal levels of government. The federal government, and, in particular, the Department of Homeland Security ("DHS") has given substantial thought to and published many highly useful documents respecting preparedness, emergency response, recovery, incident management, and related matters.¹¹ All of this valuable work, when coupled with (i) the balance of practical experience in public safety communications (communications for law enforcement as distinct from military communications) and (ii) the ultimate responsibility for day to day public safety operations, both of which rest clearly with

¹⁰ Comments of Chris Essid at the June 5, 2012, NPSTC meeting in Washington DC

¹¹ RCC here refers to the publications of DHS, DoJ, the Federal Emergency Management Administration ("FEMA"), and other federal departments and agencies with respect to relevant subject matters including the following: *National Emergency Communications Plan* (DHS July 2008); *National Planning Scenarios Created for Use in National, Federal, State, and Local Homeland Security Preparedness Activities* (Homeland Security Council March 2006) (the "NPS"); *National Preparedness Guidelines* (DHS September 2007); *Developing and Maintaining Emergency Operations Plans, Comprehensive Preparedness Guide 101* (DHS November 2010); *Threat and Hazard Identification and Risk Assessment Guide, Comprehensive Preparedness Guide 201* (DHS April 2012); *Interim Emergency Management Planning Guide for Special Needs Populations, Comprehensive Preparedness Guide 301* (DHS August 2008); *Considerations for Fusion Center and Emergency Operations Center Coordination, Comprehensive Preparedness Guide 502* (DHS May 2010); *Guide for All-Hazard Emergency Operations Planning, State and Local Guide 101* (FEMA September 1996); *Target Capabilities List* (DHS September 2007); *National Response Framework* (DHS January 2008); *National Incident Management System* (DHS December 2008); *National Infrastructure Protection Plan* (DHS 2009); *Public Safety Requirements for Communications & Interoperability* (Two Volumes) (DHS April and October 2006); *Tech Guide for Communications Interoperability* (DoJ 2006); and *Law Enforcement Tech Guide: How to plan, purchase, and manage technology (successfully!)* (DoJ 2002).

states and territories and their political and other subdivisions, has created notable advances in interoperability across the United States and, with the PSBN, has the potential to create even greater such advances.

These circumstances and considerations suggest that there is some required rebalancing of understandings in relation to the interdependencies between federal authorities, on the one hand, and states and territories, on the other, as those interdependencies relate to the effective implementation of the PSBN.

RCC's comments are not intended to minimize the importance of limited and proper standardization. RCC respectfully suggests that the above-referred-to required balance between federal authorities, on the one hand, and states and territories, on the other, should be created by:

- FirstNet's or NTIA's (within their respective jurisdictions) requiring standardization if and only to the extent standardization is necessary or useful to the performance by FirstNet and NTIA of the performance of their respective obligations under the act;
- States' and territories' exercising broad discretion in determining how they carry out their respective responsibilities under the Act; and
- Where apparently proper standardization by federal authorities and apparently proper exercise of discretion by states and territories conflict, resolving the conflict by determining the relative net benefits to the success of the PSBN of:
 - Standardization which comes with the consequent cost of the loss of potentially valuable local input; and
 - Discretionary provision of potentially valuable local input which comes with the consequent cost of loss of comparability and uniformity.

RCC surely recognizes the limitations upon the foregoing "restatement of the law of federal/state and territorial relationships in the context of the development of the PSBN." A restatement of this sort provides some useful guidance, but solves no particular problem. That observation serves to recall a law professor's humorous, but quite relevant, "restatement of the law of the commerce clause of the U.S. Constitution":

- **Heading: Congress may regulate interstate commerce.**
- **Comment:** The states may also regulate interstate commerce, but not too much.
- **Caveat:** How much is too much is beyond the scope of this restatement.¹²

¹² Thomas Reed Powell (1880-1955), attorney, law professor, legal scholar, arbitrator. Powell received his law degree from Harvard in 1904 and his Ph.D. from Columbia in 1913. He taught at Columbia in 1907-1908, and then from

RCC has broad experience, but understands its limitations, and some issues cannot be completely solved except by the exercise of sound and consistent judgment on a case-by-case basis. Much will be required of FirstNet in this respect.

Finally, RCC respectfully submits that the RFI seems to miss a critical opportunity. RCC here refers to the opportunity to acknowledge the information states and territories will require in order to make an informed decision whether to opt out or not. The decision to opt out or not is a very complex one that involves consideration of, among other matters:

- The extent to which the RAN proposed by FirstNet for a state or territory is sustainable and meets the requirements of that state or territory and its constituent concerned political subdivisions and public safety agencies;
- All factors bearing upon the cost of using facilities supplied by FirstNet;
- All factors bearing upon the cost of designing, constructing, operating, and maintaining a RAN by the state or territory in lieu of the RAN proposed by FirstNet for that state or territory;
- Concerns regarding control of the RAN within the borders of the state or territory;
- Assurances, if available, of there being no fee increases for a specified period of time and the bases for fee increases (or decreases); and
- The ability to alter the RAN as requirements grow or change or new technologies emerge to enable operational needs to be met more effectively.

RCC respectfully requests that NTIA consider:

- The list of information requests prepared by RCC and included in an Appendix to this response¹³;
- Issuing or, more properly, recommending to FirstNet the issuance of (i) an additional RFI specifically directed to obtaining other and further specification of the information required by states and territories to make an informed decision whether or not to opt out of a

1910 to 1925. He was a professor of law at Harvard Law School from 1925 to 1949. Powell served as president of the American Political Science Association. See: Freund, Paul A., "Thomas Reed Powell," 69 Harv. L. Rev. 800, 802 (1956)

¹³ RCC has prepared a more extensive version of the Information Request which will be made available to clients of RCC that may wish to press certain avenues of inquiry that are not pursued in the version of the Information Request included in the appendix to this response. Those other avenues relate to, among other matters, the question of tariff formulation and the related issue of subsidization.

federally-provided RAN or (ii) a policy document for comment respecting the information FirstNet will provide to states and territories to make an informed decision whether or not to opt out of a federally-provided RAN; and

- Supporting the independent development and maintenance of a database of FirstNet responses to whatever information requests are provided in an accepted form that lends itself to the development of a consistent database structure.

B. Specific Concerns and Direct Responses to the Questions in the RFI

Numbered Paragraph 1

Numbered paragraph 1 of the RFI refers to Section 6206(c)(2)¹⁴ of the Act, which, in the language of that paragraph, “directs FirstNet to consult with regional, State, tribal, and local jurisdictions about the distribution and expenditure of any amounts required to carry out the network policies that it is charged with establishing.” However, on the face of Section 6206(c)(2)(A) of the Act, there is no direct connection between the direction to consult and the establishment of any grant program. Moreover, Section 6206 of the Act relates to “the powers, duties, and responsibilities” of FirstNet and does not, in any manner, relate to “the powers, duties, and responsibilities” of NTIA. That paragraph, therefore, implicates certain issues of authority.

That paragraph then sets forth certain questions for comment as follows:

What steps should States take to prepare to consult with FirstNet regarding these issues?

- a. What data should States compile for the consultation process with FirstNet?
- b. Should this activity be covered by the State and Local Implementation grant program?

In RCC’s view, states and territories should take such steps to prepare to consult with FirstNet as the states and territories in their respective discretion deem useful or proper to convey such information as they may chose or as may be required under the Act to be provided to FirstNet. RCC respectfully suggests that those steps include, at a minimum, the establishment of an organization capable of carrying out the responsibilities of states and territories under the Act, preparing an inventory of assets potentially usable in support of the PSBN, the development of a needs assessment that will provide the foundation of a RAN design, and a RAN design reflecting and meeting assessed needs and the utilization of available assets. In RCC’s view, the most effective means for a state or territory to convey to FirstNet its expectations for a RAN within its borders is to present a RAN design to FirstNet for its consideration, and that RAN design should be well grounded in the needs assessment and the asset inventory.

¹⁴ Specifically, Section 6206(c)(2) (A) of the Act

RCC further respectfully submits that the states and territories should compile such data as they in their respective discretion deem useful or proper to convey to FirstNet for the purpose of seeking to make the RAN to be proposed by FirstNet as responsive as possible to the needs of the state or territory or for the purpose of providing a basis for a commercial discussion with FirstNet respecting the possible use of state or territorial facilities in support of the PSBN and such data as may otherwise be required under the Act to be provided to FirstNet. Again, in RCC’s view, the most effective means for a state or territory to convey to FirstNet its expectations for a RAN within its borders is to present an RAN design to FirstNet for its consideration, and that RAN design should be well grounded in the needs assessment and the asset inventory.

RCC further respectfully submits that the activities suggested by RCC should be covered by the State and Local Implementation grant program.¹⁵

Numbered Paragraph 2

Numbered paragraph 2 of the RFI states: “The Act requires that each State certify in its application for grant funds that the State has designated a single officer or governmental body to serve as the coordinator of implementation of the grant funds.” That paragraph then asks the following eight questions:

- a. Who might serve in the role as a single officer within the State and will it or should it vary for each State?
- b. Who might serve on the governmental body (*e.g.*, public partners, private partners, technical experts, Chief Information Officers, SWIC, finance officials, or legal experts)?
- c. How should the States plan to involve the local entities in the State and Local Implementation grant program?

¹⁵ The question -- Should this activity be covered by the State and Local Implementation grant program? – does not appear to be answerable in the negative given that Section 6302(a) of the Act, which provides for the establishment of a state and local implementation grant program, specifically provides:

The Assistant Secretary, in consultation with the First Responder Network Authority, shall take such action as is necessary to establish a grant program to make grants to States to assist State, regional, tribal, and local jurisdictions to identify, plan, and implement the most efficient and effective way for such jurisdictions to utilize and integrate the infrastructure, equipment, and other architecture associated with the nationwide public safety broadband network to satisfy the wireless communications and data services needs of that jurisdiction, including with regards to coverage, siting, and other needs.

If the use of grant funds to defray in part the cost of the preparation for consultation with FirstNet and the collection of data for such consultation is not included within the scope of “a grant program to make grants to States to assist State, regional, tribal, and local jurisdictions to identify, plan, and implement the most efficient and effective way for such jurisdictions to utilize and integrate the infrastructure, equipment, and other architecture associated with the nationwide public safety broadband network to satisfy the wireless communications and data services needs of that jurisdiction . . .,” then Section 6302(a) must require an extraordinarily unnatural and utterly restrictive interpretation.

- d. How should the States plan to involve the tribal entities in the grant program?
- e. What requirements should be included in the grant program to ensure that local and tribal public safety entities are able to participate in the planning process?
- f. How should the State and Local Implementation grant program ensure that all public safety disciplines (*e.g.*, police, sheriffs, fire, and EMS) have input into the State consultation process?
- g. How should the State and Local Implementation grant program define regional (*e.g.*, interstate or intrastate) and how might the grant program be structured to facilitate regional participation through the States?
- h. How should States plan to involve the Federal users and entities located within their States in the grant program?

In response to questions a and b, RCC respectfully submits that:

- Many states are currently making, or have already made, these decisions independently;
- The Act provides no directions to the states and territories in this regard and gives no authority to any agency to give directions to the states and territories in this regard¹⁶;
- There is no reason why the decisions made or in the process of being made should be reversed or altered;
- To the extent that states have not already made organizational decisions, the following

¹⁶ Section 6302(d) of the Act provides:

CERTIFICATION AND DESIGNATION OF OFFICER OR GOVERNMENTAL BODY.—In carrying out the grant program established under this section, the Assistant Secretary shall require each State to certify in its application for grant funds that the State has designated a single officer or governmental body to serve as the coordinator of implementation of the grant funds.

Section 6302(d) of the Act establishes a requirement that each state and territory certify in its application for grant funds that it has designated a single officer or governmental body to serve as the coordinator of implementation of the grant funds, but does not provide that NTIA, FirstNet, or any other federal official or agency should or is authorized to involve itself, himself, or herself in any manner in the choice of that single officer or governmental body. Section 6302(d) of the Act imposes a modest obligation on states and territories for administrative efficiency and should not be read as a provision in derogation of the independence of states or territories in satisfying that obligation or as a provision limiting the exercise of the states' and territories' discretion in meeting that obligation or as implying a requirement for uniformity in the manner in which the states and territories meet that obligation.

principles may be considered:

- There should be a presumption in favor of existing organizations and personnel who have the relevant experience and who can commence work without significant start-up time;
- The utilization of organizations and personnel who do not have the relevant experience or who cannot commence work without significant start-up time imports risk and the possibility of delay; and
- There is value to fresh thinking and involving personnel who are not wedded to any particular approach and can pose questions that challenge the otherwise accepted wisdom.

With respect to each of the questions c, d, e, and f, RCC respectfully submits that the following principles should apply:

- It is necessary to recognize the legitimacy of NTIA’s interest in assuring the widest possible participation in planning including genuine local involvement;
- It is necessary to recognize the legitimacy of states’ and territories’ interest in assuring the widest possible participation in planning including genuine local involvement in the manner that states and territories deem proper;
- It is necessary to recognize that there will be legitimate diversity in the manner in which states and territories go about assuring the widest possible participation in planning including genuine local involvement; and
- While NTIA should not seek to standardize how states and territories go about assuring the widest possible participation in planning including genuine local involvement, the states and territories should be obligated to certify to NTIA that they will assure the widest possible participation in planning including genuine local involvement and to explain to FirstNet how they propose to do so.

In response to question g respecting how the State and Local Implementation grant program should define regional (*e.g.*, interstate or intrastate) and how might the grant program be structured to facilitate regional participation through the States, RCC respectfully submits that:

- The question appears to assume that the term “regional,” as used in Section 6302(a) might mean encompassing a multistate area, and that assumption may not be correct¹⁷;

¹⁷ That reading of Section 6302(a) may not be proper because the clause “State, regional, tribal, and local jurisdictions” may reasonably be read as incorporating an order of decreasing scope where “State” is larger than

- Intrastate regional planning is implicit in the general planning effort for the consultation with FirstNet, and, therefore, there is no special need or utility in defining “regional” in any intrastate sense;
- Interstate planning is a complex issue because it has greater meaning if states jointly determine to opt out of their respective FirstNet-provided RANs than if states jointly determine not to opt out of their respective FirstNet-provided RANs;
- Moreover, interoperability in relation to the PSBN is assumed and required by the Act, and that assumption and that requirement reduce the need for multistate cooperation in certain respects;
- Multistate cooperation might be needed if two adjacent states determined to opt out of the FirstNet-provided RAN in order to assure that border areas are properly covered without interference, but if two adjacent states plan to utilize FirstNet-provided RANs, this coverage coordination issue should be addressed by FirstNet;
- Whereas grant programs have often expressed the value of regional planning and cooperation, it is not apparent that the value of regional planning and cooperation is as great in the context of the PSBN as it is in other contexts; and
- It makes sense for states that have worked together before to extend their cooperation to the PSBN, and the results thereof may be very valuable, but it is not clear that regional planning should create any general grant priority in relation to the PSBN unless a cooperating group can demonstrate a sound basis for special treatment.

In response to question h respecting how States should plan to involve the Federal users and entities located within their States in the grant program, RCC respectfully submits:

- The question raises issues respecting the authority of NTIA¹⁸;

“regional” and so forth. On that reading, “regional” is limited to intrastate geography. If the framers of the Act intended a multistate approach to planning, a more explicit reference thereto might reasonably have been expected.

¹⁸ Section 6302(a) of the Act, which provides for the establishment of a state and local implementation grant program, does not make any reference to Federal users and entities and does not appear to extend federal grant funding to “Federal users and entities.” Indeed, Section 6302(a) of the Act refers to “a grant program to make grants to States to assist State, regional, tribal, and local jurisdictions to identify, plan, and implement the most efficient and effective way for such jurisdictions to utilize and integrate the infrastructure, equipment, and other architecture associated with the nationwide public safety broadband network to satisfy the wireless communications and data services needs of that jurisdiction” with no mention of the needs of “Federal users and entities located within” that jurisdiction. (Emphasis supplied.)

It is true that Section 6206(b)(1) of the Act requires FirstNet “to ensure the building, deployment, and operation of the nationwide public safety broadband network, in consultation with Federal, State, tribal, and local public safety entities, the Director of NIST, the Commission, and the public safety advisory committee established in section 6205(a).”

- States and territories are experienced in cooperation with “Federal users and entities” that, quite often, are provided access to public safety trunked radio systems¹⁹;
- The states and territories can be relied upon to deal with “Federal users and entities” without the imposition of grant requirements.

Numbered Paragraph 3

Numbered paragraph 3 states: “The Act contemplates that FirstNet will consult with States regarding existing infrastructure within their boundaries, tower placements, and network coverage, which FirstNet can use to develop the requests for proposals called for by the Act. The States, however, will need time and funding to collect the necessary information before they are ready to consult with FirstNet.” Numbered paragraph 3 then sets forth three questions, one of which has three parts, as follows:

- a. Given these interrelated activities, how should the State and Local Implementation grant program be used by States to assist in gathering the information to consult with FirstNet?
- b. Should consistent standards and processes be used by all States to gather this information? If so, how should those policies and standards be established? What should those policies and standards be?
- c. What time period should NTIA consider for States to perform activities allowed under the grant program as it relates to gathering the information to consult with FirstNet?

In response to questions a and b, RCC respectfully submits:

- States and territories should use the grant program to defray, in part, the cost of the development, modification, or implementation of governance structures employed to support the necessary preparations for the required consultation with FirstNet and, in connection therewith collecting needs assessment and asset inventory information and preparing a RAN design that meets the assessed needs and utilizes the inventoried assets.
- A certain balance between standards and processes reasonably required to bring order to an undertaking of the magnitude of the PSBN, on the one hand, and the degrees of freedom that are required to enable states and territories to apply knowledge of local conditions and needs is certainly required, and that balance needs to be developed by FirstNet and the

(Emphasis supplied.) However, that provision is unrelated to and does not in any manner bear upon the grant program under Section 6302(a) of the Act and does not impose any obligations upon states or territories.

¹⁹ In the 800 MHz Rebanding, the jurisdiction licensed had to take responsibility for the transition of non-licensees users, including “Federal users and entities.”

states and territories;

- FirstNet should resist the temptation to apply rigid and comprehensive standards, but should, rather, select those categories of data that all states and territories should be required to supply in order for FirstNet to carry out its responsibilities and go no further in relation to standardization of data collected;
- FirstNet should resist the temptation to require uniform processes to be used to collect required data because so long as FirstNet is provided with the data necessary to fulfill its responsibilities, FirstNet should be at least indifferent to the data collection process;
- FirstNet should encourage states and territories to reflect their particularized needs in the data they collect and accept diverse data that serves to express the needs that the FirstNet-provided RAN should be designed to satisfy;
- FirstNet should expose for comment the categories of required data and finalize those categories after the comments thereon have been received and considered;
- Neither asset inventories nor needs assessments break truly new ground, and, therefore, subject to the standardization of the categories of required data, the adoption of processes for the implementation of needs assessments and asset inventories particularized for the PSBN can be reasonably, and should be, left to the discretion of states and territories;
- The value of the recognition of the independence and diversity of states and territories, and where their flexibility must be preserved, must be incorporated to establish meaningful standards and processes;
- The establishment of overly rigid or unnecessary standards will involve contentious issues of both substance and procedure, and the resolution of those issues is unlikely to contribute materially and positively to the development of the PSBN; and
- Any excessive focus upon standards or processes in this respect is unnecessary and a diversion from the central objective of making the national public safety broadband network available as soon as possible.

In response to question c, RCC respectfully submits:

- The time period for states and territories to perform activities allowed under the grant program as it relates to gathering the information to consult with FirstNet is a function of both (i) how long it takes to gather the information after the grants are made, and (ii) when FirstNet will be prepared for the consultation process;

- While the time period for states and territories to perform activities is not immaterial, that question should not divert focus from implementing the grant program and starting the flow of funds without which the data collection process will not begin;
- A concern for the timely collection of data for consultation with FirstNet could be addressed in part by assuring each state and territory that it would receive not less than a certain sum which could be applied to costs reasonably incurred before the grant funds are actually disbursed, and such an approach would eliminate the risks that might be viewed as attaching to prompt preparation for the consultation with FirstNet and might make a greater contribution to moving the process along than debating the time allowed after grants;
- In any event, as much as 180 days should be allowed for data collection and preparation, particularly for states having geographies, resources, and agencies that cannot be addressed in less time. There must be recognition of the facts that (i) some time may be required to organize for the process and secure assistance, if deemed necessary, and (ii) the scope and scale of the required effort may vary materially among states and territories, and, therefore, some flexibility must be built into the schedule;
- In addition, the 180-day figure does not take into account the additional time required for states and territories to issue requests for proposals and proceed through the procurement process where that process is required and where states and territories require outside assistance generally in preparation for consultation with FirstNet or assistance respecting particular engineering issues, such as tower structural and loading analyses, or other issues.
- If a formal procurement is required, then the 180-day period should be extended to one year.

Numbered Paragraph 4

Numbered paragraph 4 states: “Over the years, States have invested resources to conduct planning and to create governance structures around interoperable communications focused primarily on Land Mobile Radio (LMR) voice communications, including the Statewide Interoperability Coordinators (SWIC) and Statewide Interoperability Governing Bodies (SIGB), often called Statewide Interoperability Executive Committees (SIEC).” Numbered paragraph 4 then sets forth seven questions as follows:

- a. What is the current role of these existing governance structures in the planning and development of wireless public safety broadband networks?
- b. What actions have the States’ governance structures (*e.g.*, SWIC, SIGB, or SIEC) taken to begin planning for the implementation of the nationwide public safety broadband

network?

c. Can these existing governance structures be used for the PSBN, and if so, how might they need to change or evolve to handle issues associated with broadband access through the Long Term Evolution (LTE) technology platform?

d. What is or should be the role of the Statewide Communications Interoperability Plans (SCIPs) in a State's planning efforts for the nationwide public safety broadband network?

e. What actions do the States need to take to update the SCIPs to include broadband?

f. Should the costs to change or evolve existing governance and Statewide Plans be eligible in the new program?

g. Should the maintenance of those existing governance bodies and plans be eligible in State and Local Implementation grant program?

In response to questions a, b, and c, RCC respectfully submits:

- The Act does not authorize NTIA to question or direct which state or territorial agencies or entities shall participate on behalf of the state or territory in activities supported by the grant program established under the Act;
- The utilization of existing governance structures in the planning and development of wireless public safety broadband networks is a matter best left to the discretion of the states and territories, if not by law reserved to them;
- Many states are currently making, or have already made, these organizational decisions independently;
- The Act provides no directions to the states and territories in this regard and gives no authority to any agency to give directions to the states and territories in this regard;
- There is no reason why the decisions made or in the process of being made should be reversed or altered;
- To the extent that states have not already made organizational decisions, the following principles may be considered:
 - There should be a presumption in favor of existing organizations and personnel who have the relevant experience and who can commence work without significant start-up time;

- The utilization of organizations and personnel who do not have the relevant experience or who cannot commence work without significant start-up time imports risk and the possibility of delay; and
- There is value to fresh thinking and involving personnel who are not wedded to any particular approach and can pose questions that challenge the otherwise accepted wisdom.

In response to questions d, e, f, and g, RCC respectfully submits:

- The SCIPs are a useful source of information and should on that account be utilized;
- Updating the SCIP would be logical and useful at some point after the strategy is clear; however, priority should be given to collection and analysis of data to support the development of a RAN design, which activities provide a better use for the limited funds available;
- It is not clear that the updating of the SCIP is a necessarily relevant or useful independent task properly to be undertaken immediately and probably should not have resources applied thereto until after the completion of the collection of data and preparation for the required consultation with FirstNet because there is only so much grant funding available, and all such available funding should be dedicated to tasks that tend to increase the probability that (i) the FirstNet-proposed RAN meets assessed needs, and (ii) the availability of existing facilities and resources potentially supportive of the FirstNet RANs is amply demonstrated;
- The costs to change or evolve existing governance and Statewide Plans should be eligible in the new grant program to the extent that such undertakings are necessary to develop and/or modify the governance structures necessary to support the completion of the required asset inventory, needs assessment, information request to FirstNet and analysis of the data provided, and RAN design to prepare for consultation with FirstNet; and
- The maintenance of those existing governance bodies and plans should be eligible in the State and Local Implementation grant program to the extent that such undertakings are necessary to develop and/or modify the governance structures necessary to support the completion the required asset inventory, needs assessment, information request to FirstNet and analysis of the data provided, and RAN design to prepare for consultation with FirstNet.

Numbered Paragraph 5

Numbered paragraph 5 sets forth the following questions:

How should States and local jurisdictions best leverage their existing infrastructure assets and resources for use and integration with the nationwide public safety broadband network?

- a. How should States and local jurisdictions plan to use and/or determine the suitability of their existing infrastructure and equipment for integration into the public safety broadband network?
- b. What technical resources do States have available to assist with deployment of the nationwide public safety broadband network?
- c. How will States include utilities or other interested third parties in their planning activities?
- d. Should NTIA encourage planning for the formation and use of public/private partnerships in the deployment of the nationwide public safety broadband network? If so, how?

In response to the general question and questions a, b, and c, RCC respectfully submits:

- Certain of those questions are vague and ambiguous because the term “leverage” is not defined and could have any number of meanings, including (i) maximize the financial benefit from the standpoint of the state or territory, (ii) maximize the cost savings from the standpoint of FirstNet, or (iii) enable states and territories to bargain with FirstNet effectively over fees for the usage of state and territorial assets and resources and fees for subscriber usage²⁰;
- Neither the Act nor the RFI provides any material and useful guidance respecting the commercial agreements to be applied to address the usage by FirstNet of state and territorial assets and resources. Without such guidance, it is not possible to give useful consideration to “leveraging” until the consultation process with FirstNet and negotiation in connection therewith respecting the usage by FirstNet of state and territorial assets and resources. For this reason the first question is premature;
- Planning to use and/or determine the suitability of existing infrastructure and equipment for integration into the public safety broadband network cannot proceed until states and territories have assessed their public safety broadband needs and developed a plan for a RAN that could be presented to FirstNet, and without such a needs assessment and plan, the consideration of suitability is premature;

²⁰ All of these possible meanings are consistent with Section 6206(c)(30) of the Act where the expression “leveraging existing infrastructure” is employed.

- By asking what technical resources do States have available to assist with deployment of the nationwide public safety broadband network, NTIA is asking for the results of the asset inventory before it is prepared and before a review can be made of the utility of those assets in the context of the required RAN design, and NTIA’s inquiry in this respect is premature²¹;
- The states and territories will include utilities or other interested third parties in their planning activities by such means as the states and territories deem appropriate, but, while it may be useful to collect asset inventory information, there are some problems that remain to be addressed, including:
 - The fact that no commercial context for the use of these theoretical inventories has been provided;
 - Assets are viewed by many public safety agencies as security sensitive, and stakeholders will resist disclosure; and
 - Casting the net so wide as to include entities such as utilities may appear to be a good idea, but it is necessary to address whether capturing them involves their participation only as infrastructure providers or extends to their participation as users, and, if so, what additional capacity must be provided at what cost and how are user priority issues to be resolved; and
- The matter of utility participation requires clarification.²²

²¹ In any event, the term “assets” in this context should be deemed to include, as appropriate, people and organizations.

²² Section 6212(a) of the Act prohibits FirstNet from offering, providing, or marketing commercial telecommunications or information services “directly to consumers.” If “consumers” does not include utilities, there should be no problem, but that term is not defined in the Act. Additionally, the prohibition of Section 6212(a) of the Act applies only to FirstNet and not to states and territories. If, therefore, a state or territory exercised its right to opt out of the FirstNet-provided RAN, there would seem to be no restriction upon that state’s or territory’s offering, providing, or marketing commercial telecommunications or information services “directly to consumers,” which may include utilities. There is, therefore, a certain possible asymmetry between potential users of a FirstNet-provided RAN and potential users of an alternative state- or territory-provided RAN. This issue deserves some further consideration, including consideration of the effect of Section 6208(a)(2) of the Act.

Section 6208(a)(2) of the Act addresses “covered leasing agreements.” Under that provision, a covered leasing agreement permitting access to network capacity on a secondary basis for non-public safety services could arise from and be entered into as a result of a public-private arrangement to construct, manage, and operate the PSBN. This provision would appear to enable a utility to obtain access to network capacity, but only if the utility was a party to a public-private arrangement of the kind described. Even that conclusion is not without its problems and practical considerations, including: (i) the section suggests that the public-private arrangement must relate to the PSBN as a whole (“construct, manage, and operate **the** nationwide public safety broadband network” [Emphasis supplied.]), and no single public utility is likely to undertake that task, although a consortium of utilities might do so; and (ii) Section 6208(a)(2)(ii) provides that “the spectrum allocated to such entity to be used for commercial transactions along the dark fiber of the long-haul network of such entity,” and that provision (a) may exclude public utilities and implicate only telecommunications carriers because of the “long-haul network” requirement; (b) is very obscure because the

In response to question d, RCC respectfully submits:

- The notion of encouraging “planning for the formation and use of public/private partnerships in the deployment of the nationwide public safety broadband network” may have no meaning unless a state determines to opt out of the FirstNet-provided RAN;
- It is far too early in the process to consider the question of opting out in any definitive manner, and, therefore, consideration of encouraging “planning for the formation and use of public/private partnerships in the deployment of the nationwide public safety broadband network” is premature; and
- Completing needs assessments and asset inventories and RAN plans should be given a higher priority than consideration of means for the encouragement of states’ and territories’ planning for the formation and use of public/private partnerships in the deployment of the PSBN.

Numbered Paragraph 6

Numbered paragraph 6 states: “Section 6206(b)(1)(B) of the Act directs FirstNet to issue open, transparent, and competitive requests for proposals (RFPs) to private sector entities for the purposes of building, operating, and maintaining the network.” Numbered paragraph 6 then asks the following questions:

How can Federal, State, tribal, and local infrastructure get incorporated into this model?

- a. How would States plan for this integration?
- b. Should States serve as clearinghouses or one-stop shops where entities bidding to build and operate portions of the FirstNet network can obtain access to resources such as towers and backhaul networks? If so, what would be involved in setting up such clearinghouses?
- c. Should setting up a clearinghouse be an eligible cost of the grant program?

In response to the foregoing questions, RCC respectfully submits:

- The questions are premised upon a reference to Section 6206(b)(1)(B) of the Act which, in the language of the RFI, “directs FirstNet to issue open, transparent, and competitive requests for proposals (RFPs) to private sector entities for the purposes of building,

meaning of “commercial transactions along the dark fiber of the long-haul network” is not readily apparent; and (c) may be self-contradictory in referring to “commercial transactions along the **dark fiber** of the long-haul network – private” as dark fiber is generally understood to be not in use. (Emphasis supplied.)

operating, and maintaining the network.” That section provides no basis for action or inquiry by NTIA;

- The questions are premised upon a reference to Section 6206(b)(1)(B) of the Act which, in the language of the RFI, “directs FirstNet to issue open, transparent, and competitive requests for proposals (RFPs) to private sector entities for the purposes of building, operating, and maintaining the network.” That section provides no basis for the incorporation of “Federal, State, tribal, and local infrastructure ... into this model”;
- These are good and useful questions for FirstNet to ask, but they do not need to be resolved at this time, and the devotion of resources to those issues should have a lower priority than the devotion of resources to the completion of the required needs assessment and asset inventory and related RAN design and preparation for consultation with FirstNet;
- The question whether states and territories should serve as clearinghouses or one-stop shops where entities bidding to build and operate portions of the FirstNet network can obtain access to resources such as towers and backhaul networks is one that should be left entirely to the states and territories;
- The question of what would be involved in setting up such clearinghouses is quite premature;
- The question whether the cost of setting up a clearinghouse should be an eligible cost of the grant program assumes that there is available more than adequate grant funding to support the higher priority tasks, including the completion of the required needs assessment and asset inventory and related RAN design and preparation for consultation with FirstNet, which assumption is not obviously sound;
- The entire matter of clearinghouses seems to be an interesting, but currently, counterproductive, diversion of attention from the tasks upon which the development of the PSBN initially depends;
- The questions relating to states’ or territories’ serving as clearing houses appear to assume, contrary to fact, that states and territories have the right to offer access to telecommunications assets that do not belong to the states or territories, but rather to political subdivisions or agencies thereof or tribal entities or other local entities or organizations; and.
- Alternatively, the questions relating to states’ or territories’ serving as clearing houses appear to assume, contrary to fact, that states and territories can easily or practically obtain the right to offer access to telecommunications assets that do not belong to the states or territories, but rather to political subdivisions or agencies thereof or tribal entities or other

local entities or organizations.

Numbered Paragraph 7

Numbered paragraph 7 asks the following question:

What are some of the best practices, if any, from existing telecommunications or public safety grant programs that NTIA should consider adopting for the State and Local Implementation grant program?

In response to that question, RCC respectfully submits:

- There are several best practices currently utilized in existing public safety grant programs that would be beneficial for the State and Local Implementation grant program to incorporate. It is important to note that most public safety agencies do not have a grant writing staff. Typically, one person, most often a first responder, is assigned the task of grant preparation for their agency. Developing a grant application of this magnitude is a challenging and time consuming effort. There are several practices in place to provide all public safety agencies a reasonable opportunity to apply for funding.
- Workshops: Federal awarding agencies host numerous in- person workshops, as well as, conducting webinars to discuss the grant guidance once it is published with potential applicants. These workshops are held in every state so representatives from all local agencies have a chance to attend without incurring excessive travel costs. Workshops last several hours and any questions applicants may have can be answered by program staff. It is especially important that applicants have this instruction when there is a new grant program available. Slide presentations from these workshops should also be posted online to be used for reference when preparing the application. Applicants need to have a firm understanding of the grant program in order to develop proposals that will result in successful partnerships between the awarding agency and the grantees.
- Hotlines: It is unavoidable that, once the grant application period opens and applicants begin preparing their proposals for submittal questions, problems arise. A hotline should be established so applicants can speak to a person and have their questions answered in a timely manner. Whether it is a question about the application itself or problems submitting the actual application online, sufficient staff should be available to handle these issues to ensure applicants can apply for funding and meet the application deadlines.
- Review Panels: Once applications are submitted there needs to be a fair way to evaluate proposals and award grants. In the past, politics have played too large of a role in awarding grants. Many grant programs have public safety volunteers from all over the country who meet in Washington D.C. for a week to serve on review panels. Using neutral reviewers to

rate or rank the applications may be useful.

- **Early Data Surveys:** Unfortunately many agencies find they cannot adequately prepare grant applications in the short time allotted between the dates the grant announcement is made to the grant due date. The data applicants are required to provide as part of their grant applications can be very difficult to gather in a short time period. Some current grant programs are requesting a large amount of data going back several years. By providing applicants a list of the requested data they will be responsible for providing before the grant application period officially opens allows the preparer sufficient time to complete their agency's narratives and budget components required in the grant application.

Numbered Paragraph 8

Numbered paragraph 8 asks the following question:

What type of activities should be allowable under the State and Local Implementation grant program?

In response to that question, RCC respectfully submits: All activities related to the development or modification of governance or to the completion of the required needs assessment and asset inventory and related RAN design and preparation for consultation with FirstNet or to organizing for such activities should be allowable under the State and Local Implementation grant program, including the development, enhancement, and maintenance of governance structures necessary or useful for the foregoing purposes.

Numbered Paragraph 9

Numbered paragraph 9 asks the following questions, one of which has two parts:

What types of costs should be eligible for funding under the State and Local Implementation grant program (*e.g.*, personnel, planning meetings, development/upgrades of plans, or assessments)?

- a. Should data gathering on current broadband and mobile data infrastructure be considered an allowable cost?
- b. Should the State and Local Implementation grant program fund any new positions at the State, local, or tribal level that may be needed to support the work to plan for the nationwide public safety broadband network? If so, what, if any, restrictions should NTIA consider placing on the scope of hiring and the type of positions that may be funded under the grant program?

In response to those questions, RCC respectfully submits:

- The costs of all activities related to the development and implementation of governance, completion of the required needs assessment and asset inventory and related RAN design and preparation for consultation with FirstNet or to organizing for such activities should be allowable under the State and Local Implementation grant program, including but not limited to, the examples provided in the question and the costs of external support useful or necessary in the completion of the required activities.
- Data gathering on current broadband and mobile data infrastructure should be considered an allowable cost;
- The funding of new positions should be provided if and only to the extent that the holders of those positions are dedicated to the required planning tasks, and thus such funding should be on the same basis as that for external support useful or necessary in the completion of the required activities. The need for new positions may not be present and the creation of such positions may not be wise before a state or territory determines, if ever, to give serious consideration to opting out of the FirstNet-provided RAN. Before that time, manpower requirements (as well as the need for expertise) can be met through the use of consultants.

Numbered Paragraph 10

Numbered paragraph 10 asks the following question:

What factors should NTIA consider in prioritizing grants for activities that ensure coverage in rural as well as urban areas?

In response to that question, RCC respectfully submits:

- The question appears to RCC to be entirely well-intended, but does present certain statutory problems. The relevant provision of the Act addressing the grant program, Section 6302(a), seeks to support states' and territories' development of input for consultation with FirstNet. That section makes no reference to ensuring coverage in rural as well as urban areas. Section 6302(a) refers to coverage, but only in the context of satisfying the wireless communications and data services needs of that jurisdiction, presumably as those needs are assessed and defined by the concerned state or territory. It is, therefore, not clear that NTIA has authority to prioritize grants "for activities that ensure coverage in rural as well as urban areas."²³

²³ It is true that the Act includes multiple direct and indirect references to the need for rural coverage.

- RCC agrees entirely with NTIA respecting the importance of rural coverage in the PSBN and acknowledges that providing such rural coverage will present financial challenges as do all efforts to provide wireless coverage to areas of low population density. Where RCC respectfully differs from NTIA is on the question whether the grant program is a proper vehicle to reinforce a commitment to rural coverage. The notion of prioritizing grants for activities that ensure coverage in rural as well as urban areas has some problems because the activities in question relate to preparing input for consultation with FirstNet. How is it possible to know that such input relating to rural coverage, when provided to FirstNet, will “ensure coverage in rural as well as urban areas”? (Emphasis supplied.)

Numbered Paragraph 11

Numbered paragraph 11 asks the following question:

Are there best practices used in other telecommunications or public safety grant programs to ensure investments in rural areas that could be used in the State and Local Implementation grant program?

For examples, Section 6204(b)(2)(A)(iii) requires that the board of directors of FirstNet shall be composed in a manner so as “to ensure rural and urban representation in such appointments”; Section 6206(b)(3) provides: “In carrying out the duties and responsibilities of this subsection, including issuing requests for proposals, the nationwide, interoperable public safety broadband network, consistent with the license granted under section 6201, shall require deployment phases with substantial rural coverage milestones as part of each phase of the construction and deployment of the network. To the maximum extent economically desirable, such proposals shall include partnerships with existing commercial mobile providers to utilize cost-effective opportunities to speed deployment in rural areas”; and Section 6206(c)(1)(A)(ii) establishes that other specific duties and responsibilities of FirstNet include developing “requests for proposals with appropriate ... timetables for construction, including by taking into consideration the time needed to build out to rural areas” and “coverage areas, including coverage in rural and nonurban areas.”

Those sections place responsibilities in relationship to rural coverage upon FirstNet and not NTIA and do not relate to or bear upon the grant program of Section 6302(a). To the extent that NTIA proposes to consider prioritizing grants for activities that ensure coverage in rural as well as urban areas, the question of the authority for that prioritization should be clarified.

Section 6206(b)(1) of the Act provides that FirstNet shall “take all actions necessary to ensure the building, deployment, and operation of the nationwide public safety broadband network, in consultation with Federal, State, tribal, and local public safety entities, the Director of NIST, the Commission, and the public safety advisory committee established in section 6205(a),” but does not provide for the delegation of any power to NTIA and does not require states or territories to take any position respecting the balance of rural and urban coverage.

Additionally, under Section 6206(b)(3) of the Act, reliance is placed for the assurance of development of rural coverage not upon state or territorial action, but rather upon partnerships with commercial mobile providers, as to which that section provides: “In carrying out the duties and responsibilities of this subsection, including issuing requests for proposals, the nationwide, interoperable public safety broadband network, consistent with the license granted under section 6201, shall require deployment phases with substantial rural coverage milestones as part of each phase of the construction and deployment of the network. To the maximum extent economically desirable, such proposals shall include partnerships with existing commercial mobile providers to utilize cost-effective opportunities to speed deployment in rural areas.” (Emphasis supplied.)

In response to that question, RCC respectfully submits: FEMA has an Assistance to Firefighter’s Grant Program (“AFG”), which provides federal funds to fire departments and Emergency Medical Services (“EMS”) agencies. In the appropriations bill for the AFG, there is a requirement that no less than 19.5% of available funds be awarded to volunteer fire departments. Volunteer fire departments are typically in small towns or rural areas. This requirement was implemented to ensure that the larger paid departments in the country did not receive all of the funding under this program as the larger cities typically receive the bulk of federal funding under public safety grant programs. The AFG could provide a partial model.

Numbered Paragraph 12

Numbered paragraph 12 states: “In 2009, NTIA launched the State Broadband Initiative (SBI) grant program to facilitate the integration of broadband and information technology into state and local economies.” Numbered paragraph 12 then asks the following two questions:

- a. Do States envision SBI state designated entities participating or assisting this new State and Local Implementation grant program?
- b. How can the SBI state designated entities work with States in planning for the nationwide public safety broadband network?

In response to those questions, RCC respectfully submits:

- As RCC is not a state or territory and is not authorized to speak for any state or territory, RCC cannot properly answer the question whether states and territories “envision SBI state designated entities participating or assisting this new State and Local Implementation grant program.”
- RCC expresses no view on how “the SBI state designated entities [can] work with States in planning for the nationwide public safety broadband network,” but RCC is concerned that the focus on the PSBN remain upon public safety and is uncertain whether, at this time, harnessing that network to other purposes is wise.

Numbered Paragraph 13

Numbered paragraph 13 asks the following questions:

What outcomes should be achieved by the State and Local Implementation grant program?

- a. Are there data that the States and local jurisdictions should deliver to document the outcomes of the grant program?

- b. If so, how should they be measured?
- c. Who should collect this information and in what format?
- d. What data already exist and what new data could be gathered as part of the program?

In response to those questions, RCC respectfully submits:

- The questions present choices respecting the level of supervision by NTIA necessary to make the grant program effective;
- The grant program benefits from an inherent discipline that renders a high level of supervision unnecessary and counterproductive;
- The grant program supports the opportunity of states and territories and their political subdivisions and other entities to influence the nature of the RAN to be offered by FirstNet and to advise FirstNet of the facilities and resources of the states and territories and their political subdivisions and other entities that might be available, subject to appropriate commercial arrangements, to support the network to be developed by FirstNet;
- The states and territories certainly understand that they have but one such opportunity and that serious work is required to make the most of that opportunity;
- The interest of the states and territories in optimizing the RAN to be offered to each of them by FirstNet provides, in RCC's view, a sufficient discipline and incentive for states and territories to prepare effectively for consultation with FirstNet;
- The absence of measures of outcomes in a grant program will likely be inconsistent with congressional expectations, but:
 - The situation at issue is a special case; and
 - There are measures other than only the examination of deliverables prepared pursuant to grant funding that can be employed to determine the effectiveness of the grant program;
- The true measure of the effectiveness of the consultation process and the associated grant program is the extent to which the RANs offered to states and territories by FirstNet satisfy in fact the public safety broadband needs of those jurisdictions and the extent to which the availability of state and territorial facilities and resources can, in a commercially sensible manner, support the development of the PSBN;

- The quality of the deliverables that are developed by or on behalf of the states and territories is only a contributing factor and not an outcome-determinative factor in relation to the extent to which the RANs offered to states and territories by FirstNet satisfy in fact the public safety broadband needs of those jurisdictions and the extent to which the availability of state and territorial facilities and resources can, in a commercially sensible manner, support the development of the PSBN;
- The quality of those deliverables contributes to the effectiveness of the states and territories in their consultations with FirstNet, but the measure of critical importance is the actual result of those consultations;
- Accordingly, measuring the outcomes of the grant process separate from the consultation process is not necessarily useful because the outcomes of the grant process do not or do not alone determine the far more important outcome of the consultation process;
- The grant program should have as its outcomes the effective preparation by states and territories for the consultation process with FirstNet, and that preparation will necessarily involve (i) the states' and territories' determining how to organize themselves and their constituent subdivisions, agencies, and groups to collect required data, (ii) the development of a needs assessment that is comprehensive in scope, (iii) the development of a relevant asset inventory, and (iv) the development of a RAN design; and
- The data that already exist and the new data that could be gathered as part of the program vary entirely from state to state and territory to territory, and no pattern necessarily exists, and, if it did exist, it would not necessarily be useful.

Numbered Paragraph 14

Numbered paragraph 14 states: “The U.S. Department of Homeland Security’s Office of Emergency Communications (OEC) has developed the following tools through its Technical Assistance Program available at <http://www.publicsafetytools.info>, including: (1) Mobile Data Usage and Survey Tool – Survey process to document the current-state mobile data environment, in preparation for a migration to LTE; (2) Statewide Broadband Planning Tool– Template and support on Statewide strategic broadband planning issues designed to serve as an addendum to the SCIP; (3) Frequency Mapping Tool – Graphical tool to display FCC license information and locations including cellular sites within a jurisdiction; and (4) Communications Assets Survey and Mapping Tool (CASM) – Data collection and analysis tool for existing land mobile radio assets.” Numbered paragraph 14 then asks the following two questions:

Should States be encouraged to utilize tools and support available from Federal programs such as those developed by OEC?

Are there other programs or tools that should be considered?

In response to those questions, RCC respectfully submits:

- It is perfectly proper for states and territories to be made aware of the availability of tools and support from federal programs, but the utilization of such tools and support should neither be encouraged nor discouraged and should certainly not be required because the availability to states and territories of tools and support from non-federal sources is critical to that balance between federal influence and state and territorial independence necessary for the success of the implementation of the network contemplated by the Act for the reasons heretofore explained in this response.
- Moreover, encouraging states and territories to utilize tools and support available from federal programs alone would not be in the interests of the states and territories in the absence of an evaluation of the relative merits of tools and support from such federal sources and tools and support from non-federal sources, and it does not appear that NTIA has undertaken any such evaluation or is even aware of other available tools.
- Certain of the tools referred to are quite useful, CASM, for example, and RCC has experience with that tool. CASM, as it is currently implemented, is not an ideal tool for data collection and organization for resources and assets potentially useful in connection with the PSBN because the CASM scheme of data collection and organization:
 - Does not seem to provide for the collection and organization of backhaul resources which are a critical element of the facilities that might be available to support the PSBN;
 - Is grounded and framed in relation to an existing radio system, its users, and their equipment; and
 - Includes categories that are not relevant to or useful in relation to the PSBN²⁴; and
- There are other programs and tools²⁵ that “should be considered,” but that consideration

²⁴ The high-level CASM categories are: Contact, Dispatch, RadioSystem, RadioCache, Talkgroup, Agency, Gateway, channel, Tower, and Repeater. The collection and organization of data in a number of those categories would be of no value in the required consultation process, e.g., RadioSystem, RadioCache, Talkgroup, channel, and Repeater.

²⁵ As previously noted, RCC has devoted substantial resources to the development of (i) a comprehensive, robust, and well-informed strategy for states and territories to address the public safety broadband opportunity under Title VI of the Act; and (ii) the processes, methodologies, tools, and template necessary or useful in the implementation of that strategy. Competitors of RCC may have undertaken related development as well. This response is not an appropriate document in which to assess the relative merits of the federally-provided tools and programs and the tools and programs available from RCC, its competitors, and other non-federal sources. It can, however, be properly noted that RCC’s suite of strategies, tools, and templates is substantially more developed than the comparable tools developed by OEC. In addition, at least one competitor of RCC has made reference to its own needs assessment work for public safety broadband purposes. That work is quite interesting, but is not, like that of RCC focused upon that detailed level

of analysis necessary to translate information collected in a needs assessment into its implications for system design to meet expressed or implied requirements in relation to coverage, capacity, and reliability. RCC has its own highly-developed system design tool that has been supplemented to add LTE design capability to the wide range of design capabilities already supported.

The tenor of RCC's work in this regard can be gleaned from the following extracts from one of RCC's documents setting forth requirements for RCC's new LTE system design capacity for its CSD tool from which random deletions are made which do not prevent obtaining a sense of RCC's approach, but which protect RCC to a degree from having its work copied:

In addition to including the boundaries file for States, Counties, and Cities as described earlier. The database will also need to account for the following with the aim to create a statewide traffic distribution layer:

- a. names of agencies,
- b. number of shifts by agency,
- c. types of wireless broadband data applications by name,
- d. number of times during a peak hour each application is used,
- e.
- f. minimum required data rate in kbps by application.

The application should be as reusable as possible for integration in the new CSD-LTE to assist with the needs assessment process. The application should also be available over the web for use by remote users with specific login ID's and passwords. The process by which information is entered may include the following that seeks to identify how wireless broadband traffic for public safety may be characterized during a typical day:

1. User chooses to update expected traffic by first selecting a STATE.
2. User defines the number of STATE agencies
3. User enters the names of each AGENCY.
4. For each STATE_AGENCY, the number of SHIFTS are entered.
5. For each STATE_AGENCY_SHIFT, a user will specify:
 - a. the number of active broadband users
 - b. the number of applications in use
 - c. the number of applications planned
 - d. the name of each application
 - e. the number of PORTABLE users
 - f. percent of PORTABLE users requiring use from inside buildings
 - g. the number of MOBILE users
 - h. the number of FIXED devices
 - i.
 - j.
 - k. number of times each application is used by user during the peak hour during each shift
 - l. percent of message length attributable to application overhead
 - m. for VoIP applications, average duration of call and number of calls during peak hour
 - n.
 - o. maximum allowable roundtrip latency per application in seconds
 - p. minimum desired data rate in kbps by application
- 6.
7. User enters the names of each COUNTY_AGENCY.
8. For each COUNTY_AGENCY, the number of SHIFTS are entered.
9. For each COUNTY_AGENCY_SHIFT, a user will specify:
 - a. the number of active broadband users
 - b. the number of applications in use
 - c. the number of applications planned
 - d. the name of each application
 - e. the mobility type for each application: MOBILE, PORTABLE, FIXED

-
- f. the number of PORTABLE users
 - g. percent of PORTABLE users requiring use from inside buildings
 - h. the number of MOBILE users
 - i. the number of FIXED devices
 - j.
 - k. for FIXED applications, enter latitude-longitude coordinates pertaining to each traffic source.
 - l. number of times each application is used by user during the peak hour during each shift
 - m.
 - n. percent of message length attributable to application overhead
 - o. for VoIP applications, average duration of call and number of calls during peak hour
 - p.
 - q. maximum allowable roundtrip latency per application in seconds
 - r. minimum desired data rate in kbps by application
 - 10.** A designated CITY representative defines the number of CITY agencies for a given CITY
 - 11.** User enters the names of each CITY_AGENCY (department).
 - 12.** For each CITY_AGENCY, the number of SHIFTS are entered.
 - 13.**
 - 14.** For each CITY_AGENCY SHIFT, a user will specify:
 - a. the number of active broadband users
 - b. the number of applications in use
 - c. the number of applications planned
 - d. the name of each application
 - e. the mobility type for each application: MOBILE, PORTABLE, FIXED
 - f. the number of PORTABLE users
 - g. percent of PORTABLE users requiring use from inside buildings
 - h. the number of MOBILE users
 - i. the number of FIXED devices
 - j.
 - k. for FIXED applications, enter latitude-longitude coordinates pertaining to each traffic source.
 - l. number of times each application is used by user during the peak hour during each shift
 - m. percent of message length attributable to application overhead
 - n. for VoIP applications, average duration of call and number of calls during peak hour
 - o. maximum allowable roundtrip latency per application in seconds
 - p. minimum desired data rate in kbps by application

The inclusion of a 'shift' will allow us to perform time-based analyses of traffic. Within new CSD-LTE, a network planner will have the option to distribute traffic uniformly with the following possible end-user traffic behaviors:

- i. User traffic is uniformly distributed within jurisdictional boundaries and end-user applications are randomly enabled during peak hour.
- ii. . Location of users are randomly generated within a given jurisdiction as well as which applications are enabled.
- iii. Atypical emergent events are necessary to be included in simulations analyses to determine the most probable conditions under which conditions will the network fail to meet expected public safety performance.

A mean building penetration loss by land-use / land-cover category will need to be included to simultaneous perform outdoor and indoor analyses, coverage may then be depicted by color gradients or patterns to distinguish between ... levels of service. Noise plus interference margin by land-use category may be to more accurately account for maximum sustainable data rate (MSDR) which is determined by the SINR (signal to interference plus noise ratio).

A provision for taking into account a scheduling algorithm's performance (in)effectiveness is included to account for the potential reduction in traffic handling capabilities in overlap areas.

1.

should be given by states and territories and not by NTIA.

Numbered Paragraph 15

Numbered paragraph 15 asks the following questions:

Do the States have a preferred methodology for NTIA to use to distribute the grant funds available under the State and Local Implementation grant program?

- a. Should NTIA consider allocating the grant funds based on population?
- b. What other targeted allocation methods might be appropriate to use?
- c. Should NTIA consider phasing the distribution of grant funds in the new program?

In response to those questions, RCC respectfully submits:

- Because RCC is not a state or territory and is not authorized to speak for any states or territory, RCC cannot properly answer the question whether the States have a preferred methodology for NTIA to use to distribute the grant funds available under the State and Local Implementation grant program;
- RCC expresses no view on whether NTIA should consider allocating the grant funds based on population or on what other targeted allocation methods might be appropriate to use because there is no universally acceptable allocation methodology, and the questions posed

The site placement/selection optimization algorithm is based on maximizing SINR (signal to noise plus interference ratio), i.e., where the SINR is greater than a user defined values consistent with 3GPP standards. Other possible variables that are ...

To account for localized emergency events, CSD-LTE includes the option to create geographically linked events fashioned as follows:

1. For each event type the following should be specified:
 - a. Number and name of responding AGENCY(ies)
 - b. Number of MOBILE users by AGENCY
 - c. Number of PORTABLE users by AGENCY
 - d. Number of FIXED devices by AGENCY
 - e. Number and type of application by AGENCY
 - f.
 - g. percent of message length attributable to application overhead
 - h. for VoIP applications, average duration of call and number of calls during peak hour
 - i. maximum allowable roundtrip latency per application in seconds
 - j. minimum desired data rate in kbps by application
 - k. average duration of events is in progress.

The above provides a basis for the minimum functionality based on internal RCC discussions and existing design and planning approaches.

in the RFI in this respect implicate a necessarily political response from the several states and territories, each of which will likely have its own perspectives grounded in its own circumstances;

- RCC, however, notes that neither population nor any other single basis for allocation can effectively reflect the cost actually reasonably to be incurred by each state and territory in preparing for effective consultation with FirstNet;
- The following points should be acknowledged:
 - There is from NTIA's standpoint an understandable and legitimate attraction to an easily applied formula to allocate grant money;
 - No easily applied formula will take into account the diversity between states and territories expressed by variables other than just population; and
 - The balancing of those considerations is beyond the scope of this response;
- Phasing the distribution of grant funds in the new program such that states and territories are distributed into groups and processed accordingly may be a practical necessity; however, there should be no phasing of the distribution of grant funds for any particular state or territory; and
- The phasing, if any, of the distribution of grant funds must be coordinated with FirstNet's availability for consultation, and consultation should not be proposed or required unless and until states and territories have been provided with their entire allocation of grant funds and have been provided with adequate time to prepare for the consultation with FirstNet.

Numbered Paragraph 16

Numbered paragraph 16 asks the following questions:

What role, if any, should the States' Chief Information Officer (CIO) or Chief Technology Officer (CTO) play in the State and Local Implementation grant program and the required consultations with FirstNet?

How will these different positions interact and work with public safety officials under the State and Local Implementation grant program?

In response to those questions, RCC respectfully submits:

- The role, if any, to be played by states' and territories' CIOs and CTOs in the State and Local Implementation grant program and the required consultations with FirstNet is a

matter best left to the states and territories;

- How will these different positions interact and work with public safety officials under the State and Local Implementation grant program is a matter best left to the states and territories;
- Many states are currently making, or have already made, these organizational decisions independently;
- The Act provides no directions to the states and territories in this regard and gives no authority to any agency to give directions to the states and territories in this regard;
- There is no reason why the decisions made or in the process of being made should be reversed or altered;
- To the extent that states have not already made organizational decisions, the following principles may be considered:
 - There should be a presumption in favor of existing organizations and personnel who have the relevant experience and who can commence work without significant start-up time;
 - The utilization of organizations and personnel who do not have the relevant experience or who cannot commence work without significant start-up time imports risk and the possibility of delay; and
 - There is value to fresh thinking and involving personnel who are not wedded to any particular approach and can pose questions that challenge the otherwise accepted wisdom.

Numbered Paragraph 17

Numbered paragraph 17 states: “The Act requires that the Federal share of the cost of activities carried out under the State and Local Implementation grant program not exceed 80 percent and it gives the Assistant Secretary the authority to waive the matching requirement, in whole or in part, if good cause is shown and upon determining that the waiver is in the public interest.” Numbered paragraph 17 then asks the following question:

As NTIA develops the State and Local Implementation grant program, what are some of the factors it should consider regarding States’ ability to secure matching funds?

In response to this question, RCC respectfully submits: RCC does not believe that it can make a

useful contribution by providing a response to the question.

Numbered Paragraph 18

Numbered paragraph 18 asks the following question:

What public interest factors should NTIA consider when weighing whether to grant a waiver of the matching requirement of State and Local Implementation grant program?

In response to this question, RCC respectfully submits: RCC does not believe that it can make a useful contribution by providing a response to the question posed in numbered paragraph 18 of the RFI, except to note that any information or impression held by NTIA respecting whether a state or territory may choose to exercise its right to opt out of the FirstNet-provided RAN should not be considered by NTIA when weighing whether to grant a waiver of the matching requirement of State and Local Implementation grant program.

Numbered Paragraph 19

Numbered paragraph 19 makes the following request:

Please provide comment on any other issues that NTIA should consider in creating the State and Local Implementation grant program, consistent with the Act's requirements.

RCC has provided in this response all comments that RCC deems proper at this time on other issues that NTIA should consider in creating the State and Local Implementation grant program, consistent with the Act's requirements.

V. Conclusion

RCC thanks NTIA again for the opportunity to present RCC's views and hopes that those views engage the interest of NTIA and, in due course, FirstNet and the other stakeholders in this grand, shared undertaking.

RCC well and truly appreciates the magnitude of the task faced by NTIA and FirstNet in relation to the realization of the Act's vision for the PSBN. RCC hopes that NTIA and FirstNet will consider and value the perspective of RCC in this respect and RCC's sharing its experience with NTIA and FirstNet.

RCC reiterates its sincere assurance to NTIA and FirstNet of RCC's continuing support for those agencies, for the creation of the PSBN pursuant to the Act, and for the widest possible participation in the PSBN.

With those hopes in mind and with commitment to those assurances firmly in place, this response of RCC to the RFI is

Respectfully submitted,

Carl Robert Aron, Founder and Executive Vice President, caron@rcc.com

The Members of the RCC PSBN Working Group, broadband@rcc.com

RCC Consultants, Inc.

100 Woodbridge Center Drive

Suite 201

Woodbridge, NJ 07095-1125



Appendix: Information Request Form

Charges Associated with Use of FirstNet-provided RAN & LTE Core

Please identify and quantify all charges that would be incurred by users of a FirstNet-provided RAN.

Please identify and quantify all charges that would be incurred by users of a FirstNet-provided LTE Core.

When will the charges go into effect?

How were each of those charges calculated?

For how long will the initial charges remain in effect?

Are any increases or decreases in the charges planned?

Will there be an opportunity to try the system out without subscriber or Core charges before any legal or financial commitments are made?

Other FirstNet Charges, If Any

If a state (or territory) determines to build its own RAN, will FirstNet impose any charges on the state (or territory) other than the charges for the LTE Core resource described above?

What are the spectrum usage fees?

Technical and Operations of FirstNet RAN

General:

Please provide a description of the proposed RF infrastructure, including the number and location of major system components (eNodeB sites, control points, if any, the height of the antennas to be deployed, and identification of the antennas to be deployed).

Please describe the technical requirements for the proposed system architecture, topography, and the design, layout and capacity of the backhaul network.

Coverage:

Please provide coverage maps depicting coverage proposed with clear differentiation of the quality of coverage by area.

Please describe the propagation modeling tool and parameters utilized to create the coverage maps.

Please define how FirstNet defines coverage and differing coverage categories (*i.e.* inside heavy buildings, inside medium buildings, inside light buildings, on street, and the type and position of the device assumed).

How will this coverage be tested and confirmed?

Capacity:

Please define how FirstNet defines the capacity of the system and how it has been designed.

Please indicate the proposed capacity in each of the coverage area described above, referencing key parameters such as: individual user throughput (downlink and uplink); total sector throughput (downlink and uplink); cell edge throughput (downlink and uplink), etc.

How will this capacity be tested and confirmed?

Please indicate the number of users to be supported in the state or territory.

Verification & Reliability:

Please describe the system acceptance testing process to help ensure that the system has been properly tested and ready for public safety use and operation.

Please describe the levels of system redundancy to help maintain the system operation during adverse conditions.

Please describe the central system monitoring and control to respond to system problems such as system overloading or system component failures, and system performance reports that will be available to the state (or territory).

Please describe the process to be followed when outages occur.

Technical and Operations of FirstNet Core

Please describe the proposed architecture of the FirstNet Core to which a state- or territory-provided RAN would be connected.

Please identify the interconnection and interface points between the state (territory) RAN and the Core. Where will the key data elements such as the S & P Gateways be located?

Please describe the FirstNet Core redundancy.

How will LTE Core connections to elements not controlled by FirstNet state and local data centers, fusion centers, etc., be handled?

Please describe FirstNet's contingency plans and the options available to states and territories in the event that FirstNet does not maintain the availability of the LTE Core?

Please describe the process by which agencies would access management functions within the Core to provision users, set and adjust user priorities and Quality of Service (QoS), etc.

Please describe the process by which agencies would install, integrate and manage local applications for LTE-access by its users.

Please describe what "common" applications will be supported by FirstNet throughout the network.

Please describe how FirstNet will support roaming of users to a commercial carrier. Which carriers are supported?

Other Network Operations

Please describe any other performance characteristics of the service proposed.

Please describe how the network will be interfaced with PSAPs.

Please describe plans for NG9-1-1 integration and interfaces.

Please provide a detailed description of provisions for network security.

Please describe the FirstNet requirements for "approved" LTE user equipment to be allowed on the network.

Please describe the system maintenance organization, staffing and resources allocated to the facilities of FirstNet within the state (or territory) and the applicable response times and restoration times to restore a system outage resulting from major system failures or from minor system failures and provide definitions of failure types.

Please describe the customer service organization and the procedure for agencies to contact FirstNet concerning service and other network issues.

Commercial, Legal and Financial

Please supply copies of all proposed user agreements relating to subscriber or Core usage.

Are the agreements negotiable?

If such agreements have not been prepared, please state:

the obligations undertaken by FirstNet with respect to the provision of subscriber services and LTE Core services,

what obligations are undertaken by subscribers and users of LTE Core services,

whether FirstNet is subject to any liabilities for non performance,

how disputes in relation to FirstNet's provision of subscriber service and LTE Core services are to be resolved,

how disputes in relation to subscribers' or LTE Core service users' performance of their obligations are to be resolved,

the options of subscribers and users of LTE Core services to cancel any agreement for the provision of subscriber services or LTE Core services,

payment terms,

the ability of user organizations to trade access to their facilities for access to FirstNet's subscriber or LTE Core services,

whether states and territories will be afforded access to federal contracting vehicles for the purchase of subscriber units, RAN elements, or other required equipment or software;

what provisions enable states to require alteration of the RAN or the LTE Core as requirements grow or change or new technologies emerge to enable operational needs to be met more effectively;

how those alterations are reflected in fees; and

the transparency of the books and records of FirstNet.

FirstNet's Investment within the State (or Territory)

Please provide the total costs proposed to be expended by FirstNet to build the RAN within the borders of the state (or territory) and a detailed breakdown of those costs.

Please provide the total costs proposed to be expended by FirstNet to provide the RAN within the borders of the state (or territory) with access to the LTE Core and a detailed breakdown of those costs.