

Before the
DEPARTMENT OF COMMERCE
National Telecommunications and Information Administration
and the
DEPARTMENT OF AGRICULTURE
Rural Utilities Service

In the Matter of the)
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American Recovery and)
Reinvestment Act of 2009)
Broadband Initiatives)
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Dkt. No. 090309298-9299-01

COMMENTS OF SIEMENS ENTERPRISE COMMUNICATIONS

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Dated: April 10, 2009

SUMMARY

Siemens designs and develops value-laden, software-based enterprise communications applications and solutions that enable and exploit the full potential of broadband communications technology. Siemens strongly believes that maximizing the potential benefits of the broadband initiatives embodied in the American Recovery and Reinvestment Act (“Act”) requires: (a) establishing the broadest eligibility permitted under the Act for applicants who seek support and assistance and (b) establishing criteria that clearly distinguish proposals capable of delivering state-of-the-art, broadband-based applications and solutions to the greatest number of constituencies in a community which need broadband (including residential consumers, businesses, public safety, healthcare providers, schools, libraries and community centers).

Siemens does not support mandated apportionment of funds among Broadband Technology Opportunities Program (“BTOP”) purposes. Applicants should be encouraged to address multiple BTOP and other objectives of the Act in their proposals. The “public interest” eligibility standard must consider background and experience in delivering broadband services and technologies.

In establishing selection criteria, experience again should be a factor. So should the flexibility, adaptability, accessibility and capability of the technology proposed. Substantial weight should be given in selection criteria to the prospect for successfully addressing multiple purposes of the BTOP (e.g., education health care, and public safety) and goals of the Act. The Act’s requirement for technological neutrality does not require it to turn a blind eye to differences in technological capabilities of the various applicant proposals.

Definitions of “broadband” and other key terms should not be so narrow as to overly restrict applicant or technology eligibility. Non-discrimination and network interconnection obligations are key elements of ensuring at least the potential for the broadest array of qualifying broadband technologies and applications to be accessible to unserved or underserved areas. Successful applicants that would seek to restrict or limit such use are contrary to the basic requirements for non-discriminatory access and connectivity and should be subjected to the required enforcement process.

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Siemens Enterprise Communications (“Siemens” or “Company”), acting with counsel and in accordance with the “Joint Request For Information And Notice Of Public Meetings,” dated March 12, 2009¹, issued by the above agencies, hereby timely submits comments on certain topics contained in the Joint RFI.

I. INTRODUCTION

The broadband initiatives in the American Reinvestment and Recovery Act of 2009², provide a landmark opportunity to further expand in underserved or unserved areas accessibility to the recognized benefits and efficiencies of broadband communications tools. Maximizing the potential benefits of this expansion should be the paramount goal of implementing and translating the Act’s broadband initiatives into reality.

¹ 74 Fed. Reg. 10,716 (Mar. 12, 2009) (“Joint RFI”).

² Pub. L. 111-5, 123 STAT 115 (2009) (“Act”).

Siemens strongly believes this goal can best be met by establishing the broadest eligibility permitted under the Act for applicants who seek support and assistance under these initiatives. At the same time, any new or expanded broadband infrastructure deployed or supported with the Act's funding should afford maximum access to value-laden applications that would ride on the network. Grant proposals that are capable of delivering state-of-the-art, broadband-based applications and solutions to the greatest number of constituencies in a community that need broadband (including residential consumers, businesses, public safety, healthcare providers, schools, libraries and community centers) are clearly distinguishable. Access to such capabilities is a common sense factor for evaluating and prioritizing applications. It should be made clear that grantees who seek to limit or impair end user, whether it be a consumer, business, school or other public enterprise, use or reliance on such broadband based-applications or solutions run the risk of violating the statutory mandate for non-discrimination and interconnection.

II. SIEMENS: EMBRACING, ENABLING AND EXPLOITING BROADBAND COMMUNICATIONS TECHNOLOGY

Siemens is a joint venture between the Gores Group, LLC, a leading private equity investor in telecommunications and technology businesses, and Siemens A.G., a world-renown developer and manufacturer of telecommunications technologies. The Company has embraced the potential of broadband communications to enrich the economic and social well being of everyone through ubiquitous access to the Internet. Siemens designs and develops value-laden, software-based enterprise communications applications and solutions that enable and exploit the full potential of broadband communications technology.

Siemens' applications for unified and other communications over broadband platforms are directly relevant to and serve the goals and objectives of the Act's broadband initiatives (e.g.,

enhancing broadband access for education, health care, public safety). They can be employed to (a) support the teleworker by ensuring that the remote worker can readily communicate with and thus feels a part of their work team and the economy, (b) effectively connect the remote distance learner and provide the ability for the pupil to interact in real time with the teacher, (c) facilitate medical assistance by ensuring access by the remote physician to all of the key specialists needed to make an informed decision about a patient's treatment, (d) deliver unified wired communications and mobile capabilities to universities and K-12 schools, (e) assist in the efficient, computer-aided dispatch of public safety and first responders in emergencies and (f) support public wireless (e.g., Wi-Fi) broadband deployments by municipalities or public-private partnerships.

Just two specific examples of Siemens successful employment of these solutions with broadband network partners include:

A. Campus-Wide Wired And Wireless Network- Ursinus College, a four-year liberal arts institution located near Philadelphia, Pennsylvania, is leveraging Siemens secure convergence and connectivity solutions for its campus-wide wired and wireless network. The network infrastructure, with products from Siemens and Enterasys, a part of Siemens, supports voice, video and data collaboration applications over broadband. Siemens/Enterasys solutions prioritize and secure more than 2,000 students, faculty and staff with mobile access across 58 buildings on the 170 acre campus, including classrooms, residence halls and educational centers. A network operations staff of only two employees manages the entire wired and wireless communications infrastructure using integrated management software from Siemens/Enterasys.

B. Suburban and Rural Public Wi-Fi Network - Siemens was involved in deploying a pilot of the nation's largest, proposed Wi-Fi network in Washtenaw County, located

in southeast Michigan. Washtenaw encompasses 720 square miles and its 347,000 residents live in urban, suburban, and rural areas, including Ann Arbor, home to the University of Michigan and Eastern Michigan University. Like many other counties, Washtenaw had seen an increased demand for wireless connectivity from residents and business owners. To address this need, county officials launched a project called “Wireless Washtenaw” to bring wireless broadband service to all areas of the county, especially suburban and rural residents who could only access the Internet using slower-speed dialup connections.

Siemens and its partner, 20/20 Communications, an Internet Service Provider, provided a turnkey solution, with 20/20 owning and operating the network and Siemens serving as the equipment vendor, systems integrator and services (installation, design, RF engineering, and maintenance) provider. The equipment included the Siemens Wi-Fi mesh radio network and Siemens Wireless Integration Platform for authentication and provisioning. The Wi-Fi mesh network delivered seamless, ubiquitous wireless roaming in the cities as well as the rural environments.

Siemens’ unified-communications-applications over broadband can bring valuable information to users at a point or device of their choosing, whether it be a Personal Computer, a mobile device or a shared resource. The Company’s solutions are inherently secure and yet function with an open architecture and networks. They create the opportunity for mutually beneficial (i.e., symbiotic) relationships between technologies, business systems and operational models.

III. SIEMENS COMMENTS ON SPECIFIC JOINT RFI TOPICS: PRIMARY FOCUS ON PROGRAM PURPOSES, APPLICANT ELIGIBILITY, APPLICATION EVALUATION CRITERIA AND RELEVANT DEFINITIONS

Siemens offers comments on a selected number of questions posed by the Joint RFI related, in particular, to the Broadband Technology Opportunities Program (“BTOP” or “Program”) to be administered through the National Telecommunications and Information Administration (“NTIA”) of the Department of Commerce. The Company’s primary focus is on questions posed relating to (a) the purpose of the BTOP, (b) grantee eligibility and (c) establishing selection criteria for applications. To the extent that definitions to be adopted as part of the proceeding bear on these areas, Siemens also provides its views.

A. The Purposes Of The BTOP And Program Grants

1. A Percentage Apportionment Of BTOP Funds Among Statutory

Purposes - Siemens does not believe that a certain portion of the available BTOP grant funds should be apportioned up-front to each of the five statutory purposes of the Program set forth in Section 6001(b) of the Act. The Act does not require or expressly encourage such an apportionment. Nor does the legislative history. Any such apportionment presumably would have to be based on criteria somehow weighting the importance attached to each, creating the prospect of what could be viewed as a purely arbitrary allocation.

Further, an up-front apportionment presumes that there will necessarily be meritorious applications that fit into each of the five categories. Since the Act requires that BTOP be awarded by September 30, 2010, an apportionment might force selection of applications only marginally serving one statutory purpose while forcing denial of others that clearly advance another category where apportioned funds are exhausted.

In Siemens' view, apportionment reduces NTIA's flexibility in considering applications and potentially introduces a counterproductive rigidity into the grant application consideration process. It is premature and could undermine the effectiveness of the initiative.

2. **Encouragement Of Applicants To Address More Than One Statutory**

Purpose – While not mandated, applicants clearly should be encouraged to put forth proposals that address more than one of the Act's statutory purposes. Successful applications effectively serving more than one such purpose are a form of leverage of the funds available under the BTOP. For example, technologies and proposals that permit and promote expansion of access to broadband-based services to educational, public safety and healthcare providers should be encouraged through the selection criteria and application evaluation process. The multiple purposes addressed can be based on an assessment of the needs and priorities of the particular areas to be served, but this need not be the exclusive basis for multi-purpose applications. Again, this is a way to stretch what is a finite amount of funds to address multiple goals.

3. **Leveraging Or Responding To Other Broadband-Related Portions -**

Again, applications that propose capabilities that can serve not only the explicit and derived BTOP purposes, but also help advance the goals of other portions of the Act relating, for example, to smart grid, health information technology or transportation infrastructure are, in Siemens' view, ideal candidates. The BTOP purposes themselves expressly refer to supporting "schools... medical and healthcare providers, community colleges and other institutions of higher education", as well as "public safety."³ So there is a clear overlap and consistency with other portions of the Act that focus on these areas. Again, applications that propose and permit

³ Act, § 6001(b)(3)(A).

expanded use of broadband in multi-faceted ways should be viewed, in Siemens' opinion, as *prima facie* potentially more valuable than those narrowly focused or more limited in capability.

B. Eligible Grant Recipients: The Public Interest Standard

The Act requires that the NTIA determine by rule which entities, other than those expressly made eligible by the Act, it is in the “public interest” to deem eligible for BTOP grant awards.⁴

However, Congress clearly expressed its intent that there be expansive eligibility to receive grants:

Eligible Entities. The Conference substitute creates a new, broad definition of entities that are eligible to received grants. It is the intent of the Conferees that, consistent with the public interest and the purposes of this Section, *as many entities as possible be eligible to apply for a competitive grant*, including wireless carriers, wireline carriers, backhaul providers, satellite carriers, public-private partnerships and tower companies.⁵

This list of private-sector entities is not an exclusive one. In implementing the BTOP and determining the entities that meet the “public interest” standard set forth in Section 6001(e)(1)(c) of the Act, the NTIA must adhere to this overarching Congressional instruction. NTIA received similar comments about the broad scope of eligibility during its initial Public Meeting pursuant to the Joint RFI which was held on March 16, 2009. The “public interest” when applied in other contexts by the FCC has similarly been interpreted to afford broad discretion in approving license and other applications for Federal benefits.⁶

⁴ Act, § 6001(e)(1)(C).

⁵ H. R. Rep. No. 111-16, at 775 (2009)(Conf. Rep.)(emphasis supplied)(“Conference Report”).

⁶ The Supreme Court has described the “public interest” standard as one that “no doubt leaves wide discretion and calls for imaginative interpretation.” *F.C.C. v. RCA Communications, Inc.* 346 U.S. 86, 90 (1953) (citing *F.C.C. v. Pottsville Broadcasting Co.*, 309 U.S. 134, 138 (1940)).

Various potential criteria that could be used to establish the parameters of the “public interest” have been proposed in this process to date (e.g., an existing FCC licensee or state certificate in connection with the provision of broadband services). Siemens believes however that an important consideration should be background and experience in delivering broadband services and technologies. The BTOP is far too important for it to serve as a vehicle for “on the job training” by entrepreneurs with merely a concept.⁷

Background and experience can be demonstrated in many ways, including when the proposed grantee includes as participants individuals or entities with experience in developing, deploying or managing broadband facilities or technologies, even if the entity is newly formed or the leadership of the applicant has no direct or substantial experience. Experience in the application or use of broadband networks in the areas which are part of the BTOP purposes under the Act (e.g., education, health care, and public safety) also supports a finding that the “public interest” would be served.

In any case, consistent with the Congressional directive for broad eligibility, the “public interest” standard should be expansively applied, to include providers of applications and solutions that partner or otherwise join with broadband infrastructure developers. Siemens notes that among other things, the Act specifically permits the use of BTOP funds to acquire “networking capability ... software and digital networking technology.”⁸

⁷ The Act requires as a component of eligibility that demonstrate a capability to carry out the proposed project in a competent manner in compliance with applicable laws. Act, § 6001(e)(4).

⁸ Act, § 6001(g)(1).

C. Establishing Selection Criteria For Grant Awards

The Joint RFI poses a series of questions relating to factors to be considered in establishing selection criteria, weighting of selection criteria, prioritization of proposals and evaluation factors, and the import of the Act's requirement for technological neutrality.

1. Factors In Establishing Selection Criteria - The Act expressly requires NTIA to “consider, to the extent practical” certain factors in awarding BTOP grants.⁹ The Act does not explain or define the circumstances when consideration of these enumerated factors might be impractical, but concedes flexibility so that NTIA has the discretion in “selecting the grant recipients that will best achieve the broadband objectives of the program”¹⁰ and that NTIA “judges will best meet the broadband access needs of the area to be served.”¹¹ In Siemens' view, these broad principles set the parameters for establishing selection criteria for grant awards.

Among other specific factors that also should be considered in setting grant award evaluation criteria is the expertise or experience in developing, deploying or managing broadband technologies or networks. If projects are to be timely completed in accordance with the Act's mandate, this important factor must be built into not just the eligibility but also the evaluation equation for selecting applicant. The selection process must consider the degree to which there is present in reasonable degree the experience and expertise to enhance the prospects for timely success in completing the project. Such a factor relates as well to assessing the “long-term feasibility of the investment...” – an issue raised by the Joint RFI.

⁹ Act, § 6001(h)(2), (3).

¹⁰ Conference Report, at p. 774.

¹¹ *Id.* That being said, however, the Congress did “instruct” NTIA, “to the extent practicable, projects that provide the highest possible, next generation broadband speeds to customers. *Id.*, p. 775.

Another specific factor in setting grant award evaluation criteria should be the flexibility, adaptability, accessibility and capability of the technology proposed. For applicant eligibility purposes, Siemens is of the view that no technology proposed that meets the basic definitions should, as a practical matter, disqualify a potential applicant so long as it has the potential to contribute to the satisfaction of the Act's purposes. Indeed, the Act requires that "to the extent practicable" the "public interest" eligibility determinations be made in a "technologically neutral manner."¹² However, in establishing selection criteria for evaluating the selection of grantees, the extent to which the technology can or cannot serve multiple purposes or meet multiple needs should also be a factor included in the evaluation equation for selecting among applicants.¹³

2. **Weighting Of Selection Criteria And Prioritization Of Proposals** –

Siemens believes that there should be a fair and reasonable weighting of selection criteria for BTOP grant awards. Siemens does not propose any specific formula or scale for assigning numerical weighting factors. However, it is unrealistic to assume that all evaluative criteria should be deemed absolutely equally important to attaining the objectives of the Act.

The Act has a number of explicit objectives and purposes, with a finite amount of funds available to help fulfill them. So in selecting grantees substantial weight should be given to the prospect for successfully addressing multiple purposes of the BTOP (e.g., education, health care, and public safety), particularly when the proposal is coupled with focusing on bringing broadband capabilities to those end users in currently unserved, underserved and rural areas.

Similarly, weight should be accorded when an application proposes the deployment of technologies that enable goals of the Act beyond just the BTOP, including future applications

¹² The Act requires that "to the extent practicable" the "public interest" eligibility determinations be made in a "technologically neutral manner." Act, § 6001(e)(1)(C).

¹³ Siemens believes that these additional factors are consistent with public comments made at the March 16 and 17, 2009 public meetings.

that may still be on the drawing board (e.g., smart grid capabilities, support for advanced transportation infrastructure). The same should be the case when there is the opportunity for use of applications or solutions that allow technologies (e.g., differing forms of wireless like PCS and Wi-Fi) to “work together” in tandem to provide new or enhanced broadband access to both unserved and underserved areas or permit the hosting of a variety of business models (e.g., private enterprise, public ownership or public/private partnerships) with equal efficiency and effectiveness.

These same principles should be applied to the prioritization of applications. Siemens agrees that priority should be given to proposals that address several purposes, serve several of the populations identified in the Act, or provide services to different types of areas. Priority should be given to proposals that leverage or can address other projects supported by the Act (e.g., smart grid).

3. **Impact Of Goal Of Technological Neutrality** – The Joint RFI asks about the impact of the Act’s “technologically neutral” language on evaluative consideration of technology differences. Siemens does not read the Act to require NTIA in evaluating and selecting grantees to turn a blind eye to differences in technological capabilities of the various applicant proposals. That would be an extrapolation beyond the intent of the Act and the Congress.

The Act requires that in establishing an eligibility rule based on a “public interest” standard NTIA “shall to the extent practicable promote the purposes of this section in a technologically neutral manner.”¹⁴ However, the Congress itself expressly acknowledged the weight and priority that could be given to technological differences, noting:

¹⁴ Act, § 6001(e)(1)(C).

The Conferees are also mindful that the construction of broadband facilities capable of delivering next-generation broadband speeds is likely to result in greater job creation and job preservation than projects centered on current-generation broadband speeds. Therefore, the Conferees *instruct* the NTIA to seek to fund, to the extent practicable, projects that provide the highest possible, next-generation broadband speeds to consumers.¹⁵

Therefore, Siemens does not believe that the “technologically neutral” language of the Act precludes NTIA from considering the fact that different technologies can provide different service characteristics, “such as speed and use of dedicated or shared links” or others mentioned by Siemens above as part of the applicant evaluation and selection process. Sophisticated technologies and applications that have broader capabilities deserve a higher place in the grant evaluation hierarchy. To Siemens’ knowledge, none of the comments during the public meetings to date addressing selection criteria and weighting have claimed that NTIA is restricted or prohibited from considering such technological differences. Nor do the text of the Act or underlying Congressional intent.

D. Definitions, Discrimination And Network Interconnection Obligations

In defining key terms to be applied in the BTOP, such as “broadband” or “broadband service,” the NTIA should avoid narrow definitions that might overly restrict applicant or technology eligibility. That would be counterproductive and contrary to the intent of the Act.

From a quantitative (i.e., transmission speed) perspective, NTIA should take instruction from the FCC and other relevant and informed sources, including state broadband deployment programs, that have defined such terms. Again, however, NTIA should keep in mind the

¹⁵ Conference Report, at p.775 (emphasis supplied).

Congressional preference for use of BTOP funds to “fund projects that provide the highest possible, next-generation broadband speeds to consumers.”¹⁶

In defining “unserved” and “underserved” areas, a transmission speed component must be included (e.g., broadband service of at least 1.5 Mbps). Again, however, the quantitative standard should not be so restrictive as to excessively shrink the pool of potential applicants or technologies eligible for BTOP grants.

The Act requires that the NTIA publish “non-discrimination and network interconnection obligations” which shall include, “at a minimum, adherence to the principles contained in the” FCC’s broadband policy statement.¹⁷ That Policy Statement seeks, among other things, to “encourage broadband deployment and preserve the open and interconnected nature of the public internet” so that consumers can access the content and run the applications and use services of their choice.¹⁸

In Siemens’ view, non-discrimination and network interconnection obligations are key elements of ensuring at least the potential for the broadest array of qualifying broadband technologies and applications to be accessible to unserved or underserved areas. Thus, consistent with the terms of the Policy Statement, non-discrimination and network interconnection obligations should ensure technology neutrality and flexibility enough to take into account the variety of projects, technologies and applications that are likely to be proposed. Applications that propose to restrict or impair use of proven technologies or applications in violation of the Policy Statement or other obligations adopted are inconsistent with the objectives of the Act. In any

¹⁶ *Id.*

¹⁷ Appropriate Framework for Broadband Access to the Internet over Wireline Facilities, Policy Statement, 20 FCC Rcd 14986 (2005) (“Policy Statement”).

¹⁸ *Id.*

case, the contractual obligations adopted and imposed on grantees must be subject to enforcement through NTIA or the FCC.

IV. CONCLUSION

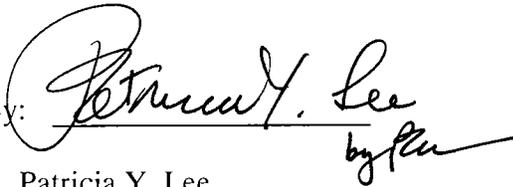
The BTOP represents a historic opportunity to deliver state-of-art broadband based technologies to unserved and underserved areas. As Congress intended, NTIA should think broadly in defining the applicants, projects and technologies eligible for grant funds under the Act as in the “public interest.” But at the same time, the BTOP cannot be a training ground for grantees without access to relevant experience and expertise in bringing broadband service to unserved, underserved and rural areas.

Proposals and applications that can solve and serve multiple purposes or programs under the Act should rise to the top in the consideration process. This ensures the application of the so-called “biggest bang for the buck” principal where there are finite funds. These should include applications that leverage multi-faceted technological capabilities by, for example, allowing symbiotic use of spectrum, and serving an array of business systems or operational models on a broadband platform or infrastructure. Applicants that would seek to restrict or limit such use or service contrary to the basic requirements for non-discriminatory

access and connectivity should be subjected to the required enforcement process, including possible return of unobligated grant support or even repayment thereof.

Respectfully submitted,

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