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BEFORE THE HEARING ON

**“STIMULATING HAWAII’S ECONOMY:
IMPACT OF THE AMERICAN RECOVERY AND REINVESTMENT ACT OF
2009”**

**SENATE APPROPRIATIONS COMMITTEE
Monday, August 24, 2009**

Thank you for this opportunity to share some local perspectives on the impact of the ARRA as it relates to broadband in Hawaii.

I. Hawaii Broadband Task Force

From 2007 through June 2009 I had the pleasure of serving on the Hawaii Broadband Task Force. The Task Force was established by the 2007 Hawaii State Legislature with a mix of public and private sector members appointed by the Speaker of the House and Senate President to provide recommendations on how to advance broadband within the State of Hawaii. I was honored to be elected as chair by my fellow task force members.

When the task force completed our recommendations for the Legislature at the end of 2008, we greeted with great enthusiasm the words of then President-Elect Obama on December 6, 2008: “It is unacceptable that the United States ranks 15th in the world in broadband adoption. Here, in the country that invented the Internet, every child should have the chance to get online, and they'll get that chance when I'm President - because that's how we'll strengthen America's competitiveness in the world.”

While there wasn't enough time or money to do everything we had hoped, the Hawaii Broadband Task Force unanimously put forward four key recommendations, summarized as follows.

1) **Broadband is Vital to Hawaii**

Broadband is critical infrastructure for Hawaii’s 21st century advancement in education, health, public safety, research & innovation, economic diversification and public services. One national study estimated the positive economic impact of advanced broadband in Hawaii at \$578 million per year. The task force recommends that Hawaii establish an aggressive and forward-looking vision that positions the State for global

competitiveness.

2) Driving Broadband Deployment

The task force found that the U.S. as a whole is dramatically lagging the leaders in the developed world in our broadband capabilities and pricing, and is falling farther behind each year. While Hawaii is doing well on some measures relative to some other parts of the U.S., the State also falls to the bottom in many national broadband studies. The task force recommends that the State consolidate all relevant regulatory and permitting responsibilities in a new, one-stop, broadband advancement authority that promotes Hawaii's policy objectives and provides advocacy at all levels of government.

3) Maximize Hawaii's Connectivity to the World

Hawaii's "lifeline" for broadband to the rest of the world is expensive submarine fiber. While Hawaii was once the crossroads for trans-Pacific telecommunications, all of the new fiber systems built across the Pacific since 2001 have bypassed Hawaii. The task force recommends that Hawaii aggressively promote the landing of new trans-Pacific submarine fiber in Hawaii, including a shared access cable station that reduces barriers to fiber landing in Hawaii.

4) Stimulate Broadband Adoption and Use

The task force believes supplying advanced broadband at affordable prices is just one side of the equation. The task force recommends that Government lead by example in demonstrating the value of broadband to our citizenry, deploying broadband services to the public, and ensuring that we do not leave behind the economically disadvantaged members of our communities who may be inhibited from full participation in the 21st century.

There is much more detail and data in our full report, which is available at www.hbtf.org and was provided to each Hawaii Legislator and the Governor just before the end of the year.

II. American Recovery and Reinvestment Act of 2009 and Broadband

It was with great excitement that members of the Hawaii Broadband Task Force greeted the emphasis on Broadband in the American Recovery and Reinvestment Act of 2009, or ARRA. While there are many components of the ARRA that are complementary to the sections on Broadband sections, such as Health IT, I'd like to focus my remarks this morning on Broadband and Hawaii.

First, it is useful to summarize three key elements of the ARRA provisions regarding Broadband:

- 1) The ARRA provides funding for a grant program for state-based data collection efforts to implement the Broadband Data Improvement Act of 2008. If successful, this will provide better data than we have ever had before about the actual state of broadband across the nation.
- 2) The ARRA charged the Federal Communications Commission to create our nation's first national broadband strategy, with an eye to submitting a plan to Congress early next year.
- 3) The ARRA creates new grant and loan programs in the Department of Commerce and Department of Agriculture to deploy broadband in accord with a clearly defined set of statutory purposes and to provide support for broadband adoption and usage. There will be three rounds of application processes for these awards.

In an orderly approach to these three objectives, we would first collect data, then use that data to craft a strategy, and then use the strategy to drive our investments in broadband infrastructure and services. But the current desperate need to stimulate the economy has driven a set of parallel initiatives in which ARRA proposals for the deployment of broadband infrastructure had to be submitted before we have data and before we have a national strategy. This is unfortunate, but it is also clear that the \$7.2 billion provided for broadband infrastructure development through the ARRA is nowhere near enough to bring our nation back to international competitiveness, much less leadership.

III. The Importance of Anchor Institutions

As the lead technologist for the University of Hawaii System, which provides all public higher education in the State of Hawaii, I was delighted to see the emphasis in the ARRA on connecting anchor institutions such as schools, colleges, universities, libraries and health care providers with broadband. Higher education and K12 have a long history of working together with State Government in Hawaii to maximize the connectivity among our locations, among our organizations and to the Internet and Internet2 as appropriate.

This spring I had the opportunity to work with a group of colleagues around the country as we tried to communicate to the new Administration the importance of institutions of higher education as broadband anchors in creating our nation's future. I have attached our report on "Unleashing Waves of Innovation: Transformative Broadband for America's Future" to this written testimony.

The Schools, Health and Libraries Broadband (SHLB) Coalition has also provided written remarks this morning that summarize the importance of

connecting all our nation's anchor institutions, and I have attached their comments to my written testimony as well. It is now well-understood that connecting these institutions can create jobs, increase capacity for providing broadband in more communities, improve the quality of a wide range of public and human services, increase our nation's competitiveness, create future demand for more advanced broadband services, and provide a safety net for those who might otherwise be left behind.

IV. Some Broadband-Related Hawaii Proposals

With the first round of competitive proposals closing only last Thursday, it is impossible to know at this time what was submitted in Round 1 from Hawaii.

However, we do know that several major statewide proposals were submitted already, and many of us talked with one another as we were preparing our applications. I'd like to highlight a few ARRA applications from Hawaii that relate to broadband. This is by no means a complete list, but a sampling of some of the significant proposals. These proposals must all be competitively reviewed and selected before any funds are awarded.

Mapping – The State Department of Commerce and Consumer Affairs was designated to lead Hawaii's broadband mapping effort. Hawaii's proposed approach is to execute the work locally through an agreement with the University of Hawaii that will apply the geospatial talents within the Maui-based Pacific Disaster Center along with several other local resources. Specialized expertise on broadband data resources will complement our local capabilities in GIS, technology and project management.

Education and Library Infrastructure – The University of Hawaii, Department of Education and Hawaii State Public Library System collaborated to submit a broadband infrastructure proposal to the Broadband Technology Opportunities Program (BTOP) to implement and/or upgrade fiber optic capability to every public school, every public higher education facility and every public library on all islands and provision connectivity of at least 1 gigabit per second to every location. This proposal also incubates wireless in schools and libraries and deploys advanced interactive distance learning capabilities in higher education.

Public Computing Centers – The University of Hawaii and Hawaii State Public Library System submitted a Public Computing Center proposal to the BTOP program to provide public computers and training in every public library and in community college libraries and education centers on all islands.

Public Safety – A large collaborative proposal was submitted to the BTOP program to provide upgraded broadband communications capabilities for neighbor island counties' first responders.

Provider Infrastructure – At least one of our local commercial telecom companies submitted a BTOP proposal to improve its middle mile infrastructure on the Big Island.

Academic Research Infrastructure – The University of Hawaii submitted a proposal to the National Science Foundation’s ARRA Academic Research Infrastructure program to address a previously unfunded recommendation in the America COMPETES Act to improve high-speed connectivity between Hawaii research and education community and national fiber optic research networks.

Again, there were likely many more proposals submitted from public and private parties within Hawaii.

V. Suggestions for Improvement in the BTOP Program

There have been many concerns expressed nationally and locally about problems with the first Round of the ARRA Broadband programs. The attached SHLB Coalition remarks provide one of the most comprehensive sets of recommendations for improvement in Rounds two and three. I’d like to provide a few observations and concerns from the teams I worked with over the past few months and that I heard from others in the community who attempted to leverage ARRA broadband funds for Hawaii.

Although the ARRA is quite clear that connecting anchor institutions and improving public safety are primary purposes of the BTOP program, the Notice of Funding Availability (NOFA) was extremely unfriendly to such applications. The single-minded focus of the NOFA on residential services for the unserved and underserved, as uniquely defined in the NOFA, made submitting a proposal for other purposes seem like trying to insert a square peg into a round hole. All applications to connect anchor institutions were forced to pretend they were “middle mile” proposals, a designation more appropriate for commercial providers than anchor institutions.

Among the challenges were:

- The extraordinarily unambitious definition of broadband that perpetuates the last years of failed U.S. policy over the prior eight years and is even more problematic for anchor institutions. The Hawaii education and library application proposes direct fiber optic connectivity to every public library with speeds several thousand times faster than the NOFA’s minimal definition of broadband.
- The use of census tract analyses to determine served and underserved areas was incompatible with the public service factors that drive the placement of anchor institutions in communities.

- The size of the matching funds required was exacerbated by the ineligibility of many of the in-kind contributions that are non-profit organizations are normally eligible to propose to meet their matching requirements.
- The quality of reviewers is extremely suspect given the unusual decision to exclude as eligible anyone who might ever wish to assist with a future proposal for their current or any future employer; Similarly, the decision not to reimburse reviewers for their expenses discourages participation by anyone outside the beltway.
- The decision to require separate applications for proposals to implement broadband infrastructure, public computing centers and/or sustainable broadband adoption programs created significant additional work and interfered with the synergies possible in developing integrated applications to deploy infrastructure and use it to drive adoption.

As the most direct way to address these problems, I strongly support the recommendation of the SHLB Coalition that a separate BTOP program be created in Rounds 2 and 3 that more directly and appropriately addresses the statutory priority on deploying broadband infrastructure to community anchor institutions.

VI. Conclusion

Over the past two years Hawaii has had substantial public dialog about the importance of broadband to our future and the need for an aggressive long-term vision that we can embrace as the basis of a new statewide strategy. The ARRA has focused similar attention nationally and stimulated new sets of conversations that are desperately needed if we are to reverse our backwards slide as a nation.

In the haste to roll out programs to stimulate the economy as quickly as possible, the federal agencies entrusted with broadband stimulus funds appear to have had great difficulty crafting programs supportive of the kinds of transformative investments that Hawaii needs to achieve our own broadband goals. Hopefully, these problems will be addressed in future Rounds of stimulus funding, and more importantly, as the FCC crafts a national broadband strategy as required by the ARRA and we begin to implement it together at the national, state and community levels.