STATE: NEW HAMPSHIRE

Date of Report: June 30, 2008

Nature of report (preliminary, final, advisory, executive/legislative):
Final/Advisory/Executive

Key recommendations:

1. Develop an independent function to provide leadership and coordination of broadband initiatives in the State of New Hampshire.

2. Streamline the wireless facility siting process.

3. Remove barriers to State rights of way (ROW) access.

4. Identify new financial resources to support broadband initiatives.

5. Evaluate the feasibility of creating a broadband services fund.

6. Improve utility pole access.

7. Provide incentives for last mile deployment in unserved and underserved areas.

8. Leverage existing resources to support the Broadband Action Plan.

9. Develop model permitting standards collaboratively with local government.

10. Engage regional planning commission's to collect data and coordinate broadband efforts.

11. Foster a cooperative relationship with broadband vendors.

12. Restructure and Refocus the Telecommunications Advisory Board (TAB) through a Subcommittee Structure.

13. Partner with an appropriate Geographic Information Services (GIS) organization.

14. Take advantage of the State's location to identify new backhaul infrastructure. The State should work with the University System of NH (USNH) and other research institutions in the State and the region to identify potential opportunities for new broadband backhaul infrastructure that would link with the Canadian Maritimes and population centers to the south. This would increase the backhaul capacity coming into the State and improve redundancy of core network infrastructure.

15. Engage local government in developing and supporting broadband initiatives.

16. Evaluate State government opportunities.

17. Support efforts to provide all libraries, schools, and town halls with a broadband connection.

18. Develop broadband and digital literacy awareness programs.

19. Monitor and continually seek ways to improve the State's national rankings for broadband.

20. Create a broadband website for users, providers, and researchers.

21. Re-examine the High Speed Heroes project completed in July 2007 (project that provided technical assistance to selected micro-businesses that had expressed interest in expanding via broadband technology.

22. Align Broadband Initiatives with the Governor's Smart Growth Policy.

23. Provide annual regional forums for citizen input of, and feedback on broadband initiatives, utilizing the methodology used for this project.

24. Evaluate the feasibility of implementing school laptop and computer recycling initiatives for at least some portions of the State of New Hampshire.

25. Measure the success of Broadband Access Project recommendations through an annual (or semi-annual) survey.

Key programs initiated: None

Recommended Appropriation: None

Web link to agency or task force: http://www.nheconomy.com/broadband-action-plan.aspx

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Statement of Values:

The State of New Hampshire will utilize broadband best practices learned from other states and nations, seek to "connect the dots" of its existing broadband initiatives, and identify the most efficient ways to maintain and improve its position as a regional leader in economic growth, innovation, and technology access by developing broadband policies and initiatives that enhance the State's digital communications infrastructure, access, and affordability.

Where we've been:

- For 5th year in a row, New Hampshire has been rated most livable state in the country by *CQ Press*.
- New Hampshire has a top 10 ranking in per capita income.
- New Hampshire has top 5 rankings for computer ownership and internet access.
- New Hampshire has consistently outperformed its neighbors and remains one of the strongest economies in the northeast.

Where we are today:

- Current state of broadband remains a mixed environment. There are areas that have access to multiple broadband connections at high bandwidth speeds, competitive rates, and services provided by multiple broadband providers. Conversely, there are areas with little or no access to broadband, and if they did need broadband it could only be provided at an exceptionally high cost.
- New Hampshire ranks 13th overall on the New Economy State Index for 2007.
- DSL Access Rates for northern New England are the lowest in the country.
- Cable modem service is available to 100% of the customers where cable service is offered in New Hampshire.
- According to FCC reports, 63% of NH residential customers have access to high-speed service (under FCC's 200 Mbps definition).
- According to FCC reports, 37% of NH business customers have access to high-speed service (under FCC's 200 Mbps definition).
- According to FCC reports, 58% of NH households customers have access to high-speed service (under FCC's 200 Mbps definition).
- Over 90% of broadband users surveyed would like to see the State take a more active role in coordinating broadband deployment.
- Over 90% of respondents believe broadband is critical infrastructure crucial for business development.
- Two-thirds of respondents did not feel that broadband services would continue to expand in their community if left to market forces (private sector deployment only).
- Broadband providers surveyed believe demand issues, such as addressing barriers to adoption are a critical component to any broadband policy.
- Broadband providers surveyed believe local siting restrictions and restrictions on public rights of way hamper the ability to deploy new infrastructure.
- Broadband providers surveyed believe the State should consider subsidizing build-out in underserved/unserved areas.
- Broadband providers surveyed believe utility pole issues such as make ready and pole attachment fees have a cost impact that can make marginally attractive deployments (where there may be low population densities) less attractive.
- Broadband providers surveyed believe taxation issues such as the Communications Services Tax in NH is 7%, which is one of the highest rates in the country and suggestions that the State should provide tax credits to spur rural investments.

- Broadband providers surveyed believe that for businesses, the continued adoption of web-based applications will drive their demand for increased bandwidth.
- Broadband providers would like to see a more coordinated effort by State leadership.
- Broadband providers surveyed believe broadband is affordable and available in most of the State.

- Broadband providers surveyed believe the State should encourage fixed wireless deployments in areas where traditional landline services are not feasible.
- "If there is a digital divide it does not simply fall along geographic lines."
- The State of New Hampshire in comparison to other states, has average to above average broadband services available to most population centers, but significant challenges exist today that warrant continued attention from both the public and private sector.

Where we want to be:

1. Resolve that broadband is viewed as critical infrastructure, and a basic requirement for education, healthcare, and government operations in the 21st Century.

2. Establish baseline standards to define what broadband means for policymaking.

3. Determine that all New Hampshire residents, businesses, and other entities will have at least one viable option to obtain broadband services (at the defined levels outlined in goal #2).

4. Improve coordination of broadband initiatives and outreach throughout the State of New Hampshire.

5. Increase the demand for broadband services through digital awareness and education.

6. Identify opportunities to improve efficiency in government.

7. Provide the New Hampshire Legislature with recommendations to improve overall access and connectivity to affordable broadband services.

8. Monitor and evaluate both national and international broadband rankings to ensure that NH is improving its ranking, or minimally not falling behind.

9. Provide consistent and regular opportunities for citizens to provide their feedback to the Telecommunications Advisory Board via ongoing regional forums and electronic communications.

10. Work with private sector vendors to ensure that public sector entities do not impede private investment that will expand broadband services in New Hampshire.

How are we going to get there?

- Any attempt to develop an action plan to address broadband therefore must evaluate not only supply-side challenges, but should equally consider demand-side issues such as the need for increased computer ownership, improved digital literacy, and demonstrating the value of broadband to residents and businesses that have yet to adopt these services.

- See 25 specific recommendations summarized above.

Broadband functionality (tiers of service) -

- After researching how other states have defined it, hearing from stakeholders at the regional forums, and considering other best practices, it became evident that assigning a fixed number to define broadband as part of this report may be short sighted and not in the best interest of developing the Broadband Action Plan.

- Based upon research, feedback from questionnaires and the regional forums, the framework for broadband should include the following characteristics:

    - **Critical Infrastructure –** Broadband must be viewed as critical infrastructure, not unlike roads, electricity or water.

    - **Reliable –** Broadband must be reliable and consistent. This is particularly important for economic development as businesses rely on web-based services.

    - **Always On –** Unlike "dial-up" Internet access, broadband must be always on and provide sustainable bandwidth speeds for the end-user.

    - **Based on Application Drivers –** The definition of broadband and broadband speed should be driven by the applications and services that will be used with it.

    - **High-Speed –** Broadband should be fast enough to allow end users to use the applications and services they need.

    - **Latency –** Broadband should have low latency.

    - **Routinely Updated –** The definition of broadband should be routinely reviewed and updated according to the current demand and application usage. Having a static definition for broadband speed will not be effective.