



County of Los Alamos

Council Meeting Staff Report

March 12, 2013

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Indexes (Council Goals):	FY12 Council Goal - Communication
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Title

The Community Broadband Network Project Design and Business Plan Completion.

Body

The Community Broadband Network (CBN) project was initiated on April 19, 2011 and the presentation of the CBN business plan to County Council is the final deliverable for the study project. Since the last presentation to Council, where the design was 95% complete, comments from the independent review of the network design have been incorporated and the design has been finalized. The majority of the work in the last six months has been to complete the CBN Business Plan. A comprehensive approach was taken in the development of the business plan that was based upon the network design and included market research, the business model and the financial model to complete the *Community Broadband Network Design and Business Plan*.

BACKGROUND

CBN has been designed to provide a secure, reliable and dedicated 1 Gigabit per second (Gbps) fiber-optic connection to every residence and business in Los Alamos County (ca. 8,610 premises). Furthermore, CBN is designed to provide County citizens with access to basic local community services such as library, recreation, permit, public safety and utilities resources. In addition, CBN is designed to provide County citizens with a broadband marketplace to purchase ultra-fast Internet, telephone and high definition video services from the service provider of their choice.

The CBN business model is based on "Open Access" principles where Los Alamos County would serve as the wholesale network operator, not a retail service provider. Retail service providers would purchase wholesale network services from CBN thereby allowing any qualifying service provider to have equal and fair access to CBN services.

MARKET RESEARCH

Market Research was conducted on many different occasions to aid in the development of the business plan. Telephone, online and in-person survey instruments were used to gauge community opinion.

Research & Polling, Inc. conducted random telephone surveys with quotas that were set for certain demographics that tend to be undercounted. This methodology ensured a representative sample of the community. In addition, this market research was more conservative and contained detailed demographic data.

Meetings with service providers were conducted to explore potential public/private partnerships as well as to determine level of interest in CBN. This research was cross-referenced with broader national trends from the Fiber to the Home Council to provide quantitative analysis for projecting anticipated subscription rates.

Key Market Research Findings:

1. Research & Polling found that 51% of the community would support a 5/16th increase in GRT while 29% opposed the increment.
2. Over 50% of residents and businesses indicate they are likely to subscribe to Internet service from a CBN provider whereas 19% would not.
3. Residents who say they would be likely to use Internet service through the proposed network would be willing to pay a monthly average of \$42.60 for this service.
4. More residents support tiered services that cost less than \$80/month, while more residents oppose those that cost more than \$80/month.
5. Businesses that say they would be likely to use Internet service through the proposed network would be willing to pay a monthly average of \$112.20 for this service.
6. Of those citizens that would subscribe to a 50Mbps service, approximately half would subscribe to a greater speed than 50Mbps.
7. 37% of residents support an amendment to the County Charter to include telecommunications while 35% of residents oppose the amendment.
8. Approximately 56% of residents believe in proceeding with CBN while 33% are opposed.
9. Multiple retail service providers expressed interest in offering tiered Internet services on CBN.

Key National Research Findings:

1. FTTP networks such as the proposed CBN are achieving take-rates of 42.2%, on average
2. Approximately 25 million homes in North America have access to direct fiber optic connectivity, with approximately 9 million actively subscribing to services.
3. There are 1,000,000 Fiber-to-the-Home subscribers with 50Mbps service
4. There are 500,000 Fiber-to-the-Home subscribers with 100 Mbps service
5. 97% of FTTH networks have less than 10,000 subscribers
6. Two thirds of FTTP subscribers work from home, and more than 10% have a home-based business.
7. 78%-89% of national homebuyers indicate that FTTP is an important consideration in their home purchase.
8. 87% of municipal fiber optic networks have experienced economic development benefits from the infrastructure investments, with 66% being from employer attraction.
9. FTTP can stimulate value within the community. Looking at various industry metrics, FTTP could generate ~\$47,000,000 in revenue per annum in Los Alamos (7,769 households with 11% starting a home-based business @ \$55,000 annual revenue) and as many as 215 new jobs (25 new jobs per 1,000 FTTP passed @ 8,610 total CBN premises passed).
10. According to the FCC, Chairman Julius Genachowski has called for at least one community in each state having one gigabit capability by 2015 to accelerate the creation of a critical mass of markets and innovation hubs with ultra-fast Internet speeds.
11. Research of federal grants and loans have not yet identified any specific programs that will finance network construction costs. In addition, research has shown that most muni-fiber networks have residents assist in financing the project. According to the Public Technology Institute, "The most commonly used form of muni-fiber financing is a tax-deductible revenue bond backed by revenue from the telecom operation or, for a community with an existing utility, the latter's total revenue."

Key business plan assumptions:

1. Quantitative analysis in the business plan was based on the Research & Polling, Inc. telephone surveys because this market research was more random, conservative and contained detailed

demographic data.

2. The online and in-person surveys were used to further the market research and to “gut-check” the core findings of the telephone survey. These surveys were particularly useful for citizens to provide their comments.
3. The market of 8,610 premises is identified based on Los Alamos County Department of Public Utilities reports, which reflects the number of premises subscribing to electrical services.
4. 100% construction of CBN would occur within 3 years.
5. The funding model assumes revenue bonds covered by 7/16th GRT levy and network revenues
6. Given the level of community support identified for a 5/16th GRT levy, the business plan makes the assumption that a similar level of support would be provided for a 7/16th GRT increment, as it is a modest increase.
7. A GRT levy would require a public election.
8. Minimum initial take rate project at 30% by Project year 5.
9. Target take rate estimated at 40% by Project year 7.
10. The CBN Business Plan projects positive cash flow generated on a year-over-year basis, though the 10 year forecast, with approximately \$8.2 million accumulated by Project Year 10.
11. The CBN Business Plan anticipates an Internal Rate of Return (IRR) of ~3% when looking at the 10 year forecast of free cash flow and using a terminal value of 10.
12. Wholesale Internet capacity is available to retail CBN service providers by middle-mile network provider(s).
13. REDINet connectivity out of Los Alamos will be improved over the current microwave connection at some point, so that access to higher world wide web internet bandwidths are less constrained.
14. Some Internet Service Providers (ISPs) will agree to provide service using the County infrastructure and there will not be a significant private investment in similar Countywide infrastructure by the private sector in the near term.

The *Community Broadband Network Design and Business Plan* has been completed pursuant to project requirements. It provides the recommended approach for construction and financing of the FTTP network in Los Alamos County. Movement from a study to implementation of the CBN project would require continued stakeholder meetings, a bond election and the selection of service providers and contractors to execute the project. This presentation concludes the CBN project study.

Fiscal and Staff Impact/New Item

The initial cost to build the CBN is approximately \$47.2 million. The CBN Business Plan recommends that this amount be financed through a revenue bond issuance, repaid over the course of 20 years by implementing a 7/16th GRT increase.

The CBN Business Plan recommends that a 7/16th GRT would produce sufficient annual revenues to cover the debt service on the proposed revenue bond package for initial network construction.

In addition to the initial construction costs, within 7 to 9 years in operation, equipment refresh is recommended to maintain robust network performance. This would involve an estimated network reinvestment of \$7.6 million, which would be funded through a shorter term revenue bond package, with debt service covered through accumulated cash flows.

Average annual operating expenses associated with the day-to-day administration, maintenance, support, and marketing of the network are estimated to be \$2.3 million, which would be covered by revenues generated by selling wholesale network services to retail providers, combined with the 7/16th GRT increment.

CBN’s revenue model is based on two fundamental elements:

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1. Broadband revenues for wholesale network transport to retail service providers.
 2. Gross Receipts Tax increment for covering debt service.

Attachments

A - CBN PowerPoint Presentation

B - Network Design Report - available online and provided to Council under separate cover

C - Business Plan Summary - available online and provided to Council under separate cover

D - Business Plan Report - available online and provided to Council under separate cover

E - Community Feedback