
Ashland Fiber Network Strategic Business Plan

**August 2010
City of Ashland
Information Technology Department**



Executive Summary

As of August 2010, the City of Ashland's telecommunications utility provides consumers with two types of services: (1) Wired and wireless Internet access sold principally through partnerships with local business resellers and (2) cable television via a local company that holds a franchise and a contract with the City to operate on Ashland Fiber Network's (AFN) infrastructure. The utility serves approximately 4,200 Internet customers and about 1,800 cable television subscribers.

This strategic business plan combines elements of business planning and long-range strategic planning used in government to define AFN's purpose and business. That approach helps balance the telecommunications utility's conflicting roles as public service and revenue-supported utility. However, while AFN's history and past finances are pertinent, it is more important that the City of Ashland has a plan for AFN's future that meets outcomes required by the City and its leaders.

AFN's management assessed the telecommunications utility's business and financial stability as of mid-2010. AFN's business model was deemed viable for a maximum of three years based on the advent of emerging Internet-based entertainment technologies. Two primary options were identified for AFN's future: (1) Selling the utility or (2) reorganizing around a business model centered on revenue from new services.

Analysis showed the sale of AFN likely would net a small fraction of the amount needed to pay off the 2004 bond issued by the City to cover AFN-related costs. Sale price estimates were based on revenues, value of assets, and customer value approaches. AFN's customer count represents its highest valuation, but falls well short of bond obligations.

Reorganizing AFN as both an Internet provider and channel partner for telecommunications services has the most long-term financial advantage to the City of Ashland. This option contributes the most to operating costs, debt, municipal services, and maintains economic development benefits.

This strategic business plan re-centers Ashland Fiber Network as a telecommunications utility that (1) retains its high-speed Internet business; (2) grows revenues through adding products and services customers demand; (3) attracts customers through valuable online municipal services and a community-owned message; (4) works with local partners to develop new services offered; and (5) clarifies the relationships AFN has with its vendors by defining wholesale-retail and full partner contract options.

Successfully implemented, the plan achieves the goals AFN carries into its 2011 fiscal year. Ashland's residents would have access to a basic level of low-cost service that channels customers towards additional services offered and Ashland-specific information. This customer acquisition strategy positions AFN to have stronger financials. It would also aid in attracting potential buyers in the future, retaining the option of selling AFN at a higher price at a more opportune time, if desired.

Analysis of business and revenue models show AFN must move quickly to implement the 2010 objectives detailed in this plan. The aggressive schedule has associated risks, but is necessary to reposition AFN before its revenues deteriorate seriously. Key recommendations and work for the fiscal year includes the following:

- Provide products and services customers demand within the AFN channel. Do not eliminate historical partner relationships with local businesses. Instead, replace ISP partner agreements with new contracts to vendors that provide Internet and other services to customers through AFN. Work with existing and new partners to identify, test, pilot, and roll out new services.
- Offer a low-cost basic access level for all Ashland community members. Leverage this service to attract customers to AFN and additional services.
- Improve customer acquisition and retention through one-call signup, an updated website that channels product options, integration with utility connections, an emergency notification system, and superior customer service.
- Control growth of critical costs by securing a more advantageous Internet bandwidth service contract.
- Enhance revenues through a new cable television services contract that addresses high-definition channels, IP-based television options, and more robust service bundles.
- Adjust staffing levels based on workloads and make better use of contract services for variable work needs.
- Grow AFN's economic development role for the Ashland community by working with related City of Ashland efforts, the Ashland Chamber of Commerce, and the area's economic development organizations to play a role in attracting and retaining businesses to Ashland.
- Address telecommunications needs identified in the City's economic development plan through AFN's capital system plan.
- Communicate more effectively with City Council and the City Administrator. As the telecommunications utility's executive board, maintain regular communications on performance metrics and

planning items. Improve public communications related to AFN's role in the community and progress on its financial goals.

- Implement a new AFN rate structure that moves away from universal flat pricing and towards a structure sensitive to consumer and business needs. Matching products with customer type, coupled with incentives for sales partners, should increase AFN's revenues.

The work plan above is anticipated to stabilize AFN's revenues from existing business lines at \$1.9 million, reflecting the revenue trends observed in Fiscal Year 2010. Based on the success of new products, services, and contracts in the wireless, cable, and partner-based business lines, new revenues are projected in the \$105,000 to \$280,000 range. Resulting total revenues of \$1.9 million to \$2.1 million are against \$2.0 million in projected expenditures, after cost savings that have been executed or are in process. These figures do not count the one-time payment from reserves towards bond debt and does not sacrifice important capital investments into the infrastructure.

Heading forward, the foundation established in Fiscal year 2011 sets AFN on a strong course for positive net revenues in the 2012 and 2013 fiscal years. Current projections indicate achieving positive Average Revenue per Customer of between \$2 and \$29 is realistic over that period.

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Strategic Business Planning

Ashland Fiber Network (AFN) serves as both a business enterprise and a government entity. Organizations like these are managed under a blend of public expectations and non-tax revenue requirements that often conflict. As such, traditional business planning tools are not sufficient to organize AFN's direction. Elements of long-range government planning must also be applied in order for leaders to set a mission and goals that balance the roles of providing a public service and operating in a way that is fiscally sound.

A clear vision will allow AFN to move along a path that is understood by its stakeholders, is beneficial to the community, and positions AFN to be a contributing asset for the City of Ashland. This plan references AFN's history and past performance, assesses current conditions and constraints, and incorporates stakeholder input. It also addresses community needs and economic development in defining the goals AFN must take on to remain a viable enterprise.

This process defines AFN's business direction from 2010 until 2013, as well as laying a longer-term framework to react to the telecommunications landscape that continues to evolve. Toward achieving that outcome, the plan must describe elements of AFN's products and services, marketing approach, operations and organizational structure, and financial performance goals.

For various reasons, Ashland Fiber Network has struggled to define a focus beyond operational effectiveness throughout its history. This plan aims to define a concerted vision for AFN. By organizing resources around a plan that meets those desires, the utility's business and staff can be evaluated for their performance on specific measures, course corrections will fit with the enterprise's long-term direction, and AFN can avoid further drastic changes in purpose, whether perceived or real.

Business Definition

Short History

The City of Ashland's Electric Department originally presented its case to create Ashland Fiber Network (AFN) in the late-1990s. The proposal responded to the regulatory, market, and public environments of the period. It was a conspicuous time with high-technology industry taking hold, stock markets at historically high levels, capital markets flush with low-interest money, the Federal government prioritizing telecommunications services outside of major metropolitan areas through the Federal Telecommunications Act of 1996, and deregulation of energy markets setting an unknown future for public utilities providers. Ashland Electric Department presented the creation of AFN as an opportunity. The City could create a telecommunications utility to meet new demand for communications services in Ashland while diversifying and buttressing the City's electric business. Electric rates were also pledged in support of the effort.

Ashland's City Council approved the Electric Department's plan to build a fiber optic communications ring in February 1997 and the City's AFN Implementation Team was formed. The AFN business plan was presented by the Electric Department to Ashland's City Council in late-1998 and was approved by Council. That plan intended for Ashland Fiber Network to be self-supporting through revenues, with initial construction debt repaid by operating revenues within a ten-year period.

The AFN project experienced financial problems quickly after launch. Charter Communications purchased TCI and rebuilt their network in Ashland to create an equal alternative. Price competition ensued and AFN construction costs went significantly over budget. The telecommunications utility failed to generate positive net revenues from inception and a critical moment for Ashland Fiber Network came in 2004, when the City of Ashland determined that AFN would never be able to pay its business and intra-fund loans. \$15.5 million in bonds were issued to consolidate AFN-related debt and to provide a modicum of financial certainty.

AFN continued to struggle to define its business and identity over the ensuing years. Various managers all brought their own strategies, focuses, and organizational structures to attempt to make AFN viable. Restructurings included staff moves, separating AFN from Ashland's Electric Department, investing in new products to sell that did not materialize, contracting out operation of AFN's cable television business line in late-2006, refocusing on providing wholesale Internet service, and even bleeding resources between AFN and the internal City Computer Services Division. That lack of long-term clarity has contributed to the mixed results and weak financial performance that exist today.

Ashland Fiber Network has struggled during the period when its cost pressures were lower and net revenues could have been much higher. Internet service provision continues to transform into a commodity, with characteristically low margins and limited growth potential. Indeed, Internet-based entertainment and communications services carry more value than the infrastructure those services operate on. Today, Ashland Fiber Network is a decade old and operates primarily as an Internet service wholesaler. Its revenues have not met operating and debt expenses, and capital reinvestments into the AFN infrastructure have been nominal. Though on a performance basis, AFN has shown a strong record of meeting standard operating measures, it is not yet positioned to offer the new services customers demand in terms of planning, resources, contracts, and projects.

Business Description

Ashland Fiber Network provides advanced telecommunications services to the Ashland Community. Services currently include Internet access and cable television. Its customers are Ashland’s businesses, residents, and visitors. AFN’s customers are constrained geographically to the city, inhibiting long-term revenue growth emphasizing customer volume. Opportunities do exist to support neighboring local governments.

Mission Statement

Provide Ashland with a public telecommunications utility that creates opportunities and enables our citizens, businesses, and municipal government to thrive as a connected community.

Existing Products and Services

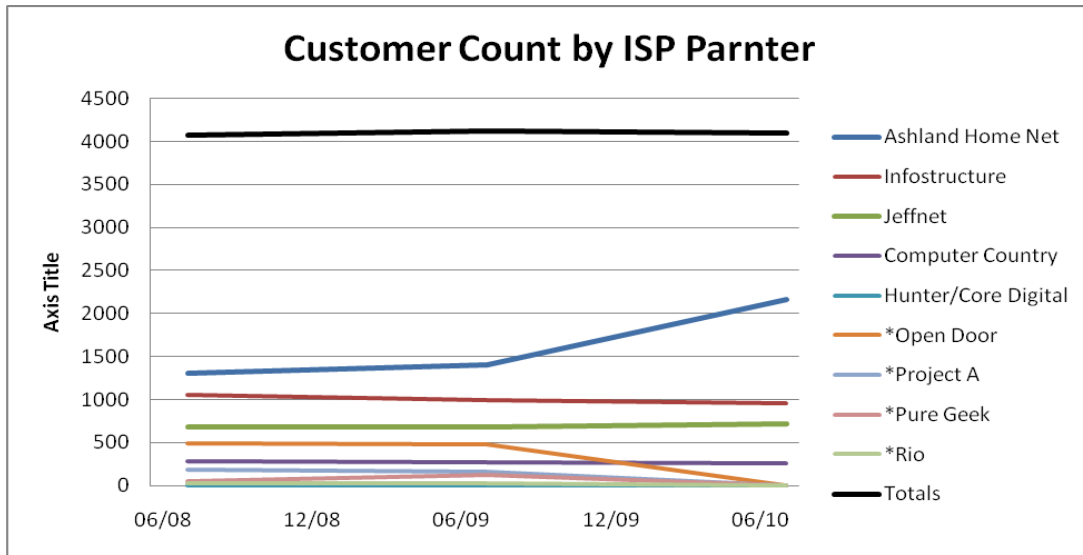
Following are Ashland fiber Network’s current products. AFN’s products are commodity services in nature and almost identical to those of alternative providers. Though product features are essentially the same, AFN can differentiate itself on other factors, such as the having a citizen-owned service, providing superior customer service, and the positive local economic impacts of using locally-owned services and partners.

Wholesale Internet

Ashland Fiber Network’s primary business line is wholesale Internet service provided in partnership with local businesses, called “ISP partners”. This service provides the physical network connection between customers and the Internet at defined service speeds. AFN is responsible for the supporting infrastructure and contracting for the bandwidth to support aggregate usage.

Current partners include Ashland Home Net, InfoStructure, JeffNet, and Computer Country. In aggregate across all its ISP partners, AFN has approximately 4,200 customers, generating almost \$1.54 million in Fiscal Year 2010 revenues.

3-Year Customer Count Trend				
	07/08	07/09	07/10	3-Yr Change
Ashland Home Net	1301	1402	2159	858
Infostructure	1048	992	957	-91
Jeffnet	679	682	723	44
Computer Country	287	269	252	-35
Hunter/Core Digital	2	4	3	1
*Open Door	487	474	0	-487
*Project A	185	158	0	-185
*Pure Geek	54	124	0	-54
*Rio	26	23	0	-26
Totals	4069	4128	4094	25



**Open Door and Project A merged with Ashland Home Net, 11/1/09. Pure Geek was acquired by Ashland Home Net, 12/1/09. Rio no longer offered AFN services as of 4/1/10*

Wireless Internet

AFN carries approximately 40 customers on the utility’s AFN Anywhere, AFN Rural Wireless, and AFN Max services. AFN Anywhere is a WiFi service operating primarily in Ashland’s downtown area. AFN Rural is also a WiFi service, but focused on customers in areas on the periphery of Ashland’s boundaries. AFN Max is the telecommunications utility’s high-speed WiMax service, which is currently being piloted with three customers. Total revenue from all wireless Internet services in Fiscal Year 2010 was approximately \$6,000. This business line has the highest potential for growth.

Retail Internet

Approximately 60 customers connect directly through AFN and not through an ISP partner. AFN’s direct retail customers mostly enrolled through an unadvertised on-network web page and pay a higher rate (\$42) than the average of what ISP partners charge. This price is set to compete with ISP partners. Total revenue from this subdivision in Fiscal Year 2010 was about \$27,000.

High-Speed Data

Ashland Fiber Network functions as a direct high-speed data retail provider to a small set of customers. Services include gigabit direct fiber-to-the-premise (FttP) services to almost 20 Ashland businesses that require high-end telecommunications services. These are higher-revenue accounts and represent approximately \$200,000 in revenues for AFN annually.

Cable Television

AFN’s cable television operations are contracted out to a local company through a head-end lease agreement. When the City elected to end its internal cable television operation, it conducted a formal Request for Proposals process to maintain Ashland’s cable television alternatives. In this manner, Ashland preserved lower rates resulting from competition for residents and generated revenue on existing infrastructure. The company offers analog cable television service to about 1,800 customers. The contract accounts for approximately \$110,000 in revenues for AFN annually.

AFN's head-end lease agreement for cable television services expires in late 2010. As of July 2010, the utility has begun preparations for a new request for proposals (RFP) process to replace the contract. The RFP is planned for release in August and will address capacity to offer service "bundles" to match those offered by alternative providers, as well as cover more of AFN's infrastructure maintenance costs and costs of regulatory compliance.

Marketing

Ashland Fiber Network, in its role as a wholesaler, expends approximately \$25,000 annually on advertising to promote the AFN brand. The challenge inherent in directly marketing the AFN brand is that it detracts from the ISP partner relationship and draws customers directly to AFN instead of to ISPs. Even when an AFN representative signs customers up with ISP partners over the phone, the AFN-ISP partner relationship confuses many consumers. Further, AFN's low customer acquisition rate reflects a minimal marketing approach on the part of ISP partners that will not capture more of the Ashland market over time.

AFN's work with ISP partners on defining AFN as a co-brand can and must be improved to achieve market share goals. Models that use incentives for increasing revenues, acquisition of new customers, and customer satisfaction are an untapped tool for AFN and will play an essential future role.

Customers

Citizens of Ashland are generally well-educated, technologically savvy, and are apt to adopt new products and services quickly. These customers also show a tendency towards buying local and supporting their community.

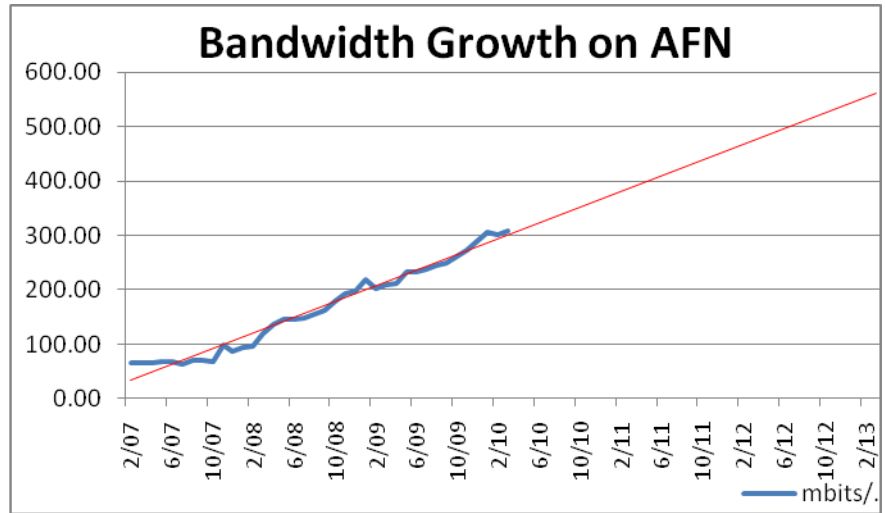
The City's demographics trend toward a mature community. The City's population is predominately over 18 years old (~80%), and has a relatively high population cohort over the age of 65 years old (~15%). The over-65 demographic tends to have a high level of disposable income and, so, is highly sought-after. The employed workforce largely is in the Healthcare, Retail/Service, Social Services, Manufacturing, Construction, and Federal/State/Local Government sectors. The large proportion of Ashland businesses are small businesses employing nine people or fewer. The community's few large employers include Southern Oregon University (~775 employees), the Oregon Shakespeare Festival (~500 employees), Ashland Community Hospital (~400 employees), Ashland Public Schools (~300 employees), and the City of Ashland municipal government (~250 employees).

Currently there are approximately 4,200 active modems in the City of Ashland subscribing to AFN. Due to Ashland Fiber Network's relationship with its retail partners, AFN lacks most customer and service data. This makes it difficult for AFN's management to react to emerging demand on anything but a broad level.

Current Demand

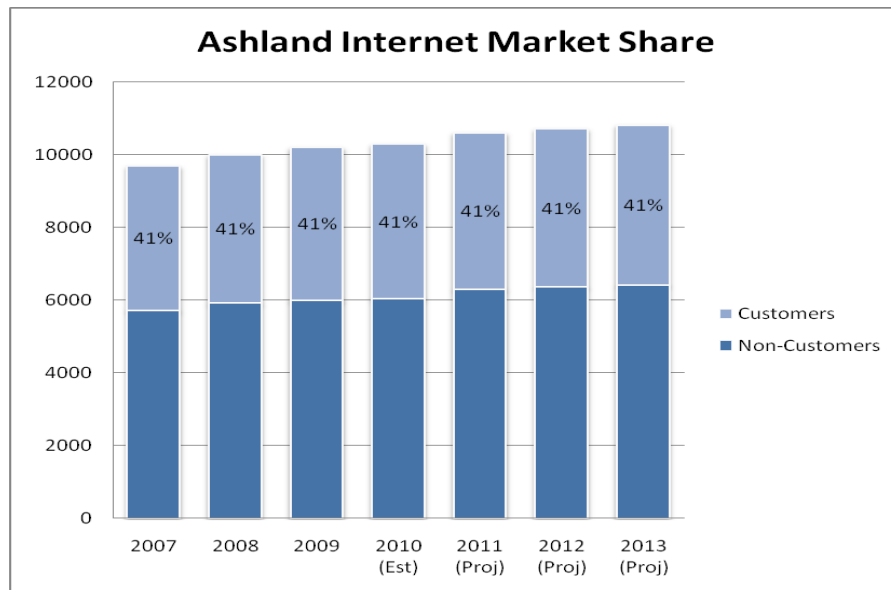
Customer bandwidth consumption averages just over 350 Mbps as of the end of AFN's 2010 fiscal year. This was a one-year increase of about 100 Mbps, or 40%. Based on industry reports and surveys of communities with municipal telecommunications networks, this growth rate is roughly representative of the national trend. Usage is expected to rise at an even faster rate through the end of the 2010 calendar year.

While the bandwidth usage growth rate is consistent with the nation, in Ashland the average per-customer bandwidth usage is as much as three times higher than in other fiber network implementations. Without detailed market research, the operating assumption is that Ashland's high bandwidth usage rates reflect its larger proportion of telecommuting workers, small businesses, and consumers attempting to stay connected with distant friends, family and cultural events.



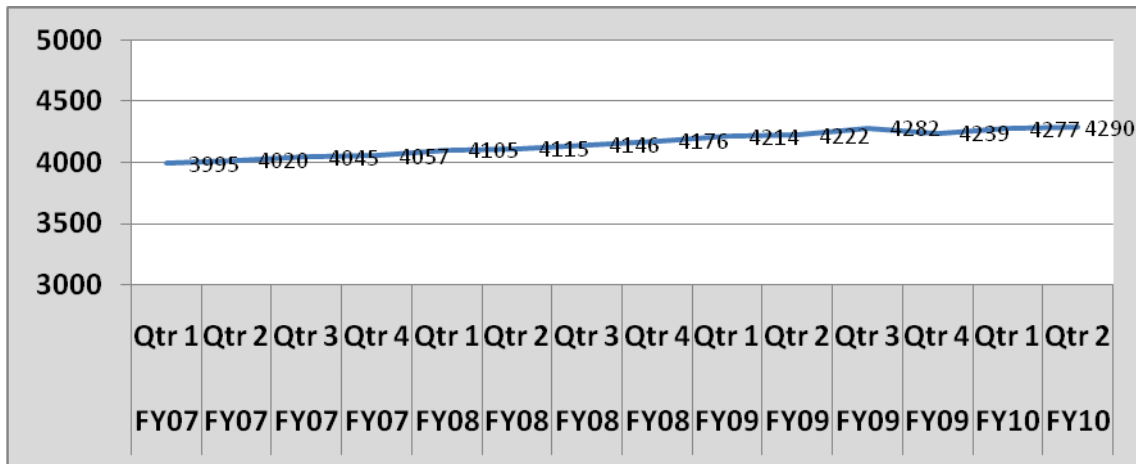
Market Share

Ashland Fiber Network's Internet service market share is estimated at 41% of all households; business accounts are not distinguished due to lack of full customer data. There are approximately 1,300 homes for which AFN cannot provide wired services due to various construction, contract, and funding issues associated with the original AFN build project. This puts AFN's market share at just over 47% for homes it can reach. The telecommunications utility will use the broader market share rate as its performance metric due to efforts to broaden high-speed Internet services to reach all of Ashland.



Customer Churn

AFN ISP partners acquire new customers at an average monthly rate of less than 0.6%, quarter-to-quarter. This acquisition trend is somewhat positive and highly consistent over the time period. ISP partners have not invested heavily in continuous advertising AFN services to date, with the exception of JeffNet, which contributes to a very slow growth rate.



AFN's churn rate is steady at approximately 21% per year. The telecommunications industry typically has one of the highest churn rates of all major sectors based on low switching costs and similarity of products across alternative providers. Indeed, moving to a new cable or Internet provider, wireless carrier, or phone company is most often a quick and easy process, leading to an average telecommunications churn averages just above 30%, according to a 2009 international study from Sweden's Lulea University of Technology. That study also showed churn rates to be consistent internationally.

AFN's churn rate consequently places it at the low end relative to national companies. This is very desirable as it tends to require less marketing costs to reacquire customers with no increase in overall revenue. However, the churn rate is also difficult to put into perspective. AFN's churn rate may be low because of customer loyalty, attraction to a community-owned utility, a shortage of equivalent options, distaste for competitors in the marketplace, the churn rate in the southern-Oregon region may simply trend lower than average, or any combination thereof. In any case, AFN should work to maintain its low customer attrition.

Customer Preference and Growth Trends

A foremost trend in the current telecommunications industry landscape is consumer adoption of smartphones with wireless entertainment and connectivity options. The popularity of Blackberry devices in the business space and then mass adoption of Apple's iPhone on the consumer side have shaped this movement. The recent and massive release of Apple's iPad, fast growth of devices based on Google's Android operating system, new non-telephone functions, and expansion of Apple and Android applications stores all point towards an accelerating trend for the coming two years. The number of customers using the Internet by smartphones is impressive and is affecting the entire telecommunications industry. Although smartphones services are driven by the respective cellular carrier of the device used, small businesses such like those in Ashland require options to access that market. These are needs AFN and its business partners can help meet.

Under the trend towards service bundling, companies typically offer some combination of television, telephone, and Internet services to customers with additional savings for each additional service brought to the company. For example, a customer with cable television may opt to add telephone service with a \$5 discount, and then opt to add Internet service for an additional \$5 discount. Bundles decrease the revenue margin on services, but attract and retain customers. Customer churn rates decrease when a customer has increased difficulty moving multiple services to alternative providers. Only one AFN partners currently offers a service bundle option.

Growing AFN to obtain a commanding market share will be difficult. Internet access is a commodity-type service offered within a highly competitive telecommunications industry. Price is the driving factor for many customers and AFN has no prospects for obtaining Internet bandwidth at rates lower than Qwest and Charter. The situation is the same for AFN's cable television vendor's ability to obtain better prices for programming. Coupled with a finite number of businesses and residents within Ashland's boundaries, expansion will reflect a mature and slow-growth market model.

Industry Trends

Cellular service providers are currently advertizing “*broadband*” services to consumers and are positioned to shape a large portion of Internet usage due to the increasing prevalence of web-enabled mobile devices. Increased bandwidth demands connected to this trend have begun to hit cellular carriers. Capacity on some networks and for some popular services is at its limits. Other carriers have recently invested billions of dollars in augmenting their networks. Key factors with the growth of smartphone-based Internet usage are how it affects bandwidth usage trends and whether wireless services begin to replace wired access—e.g., telephone companies struggled against dwindling revenues as cellular companies have grown.

Bandwidth utilization by customers is another broad industry issue. Telecommunications companies are working to find tools to tamp down certain types of consumer behaviors, such as Comcast's pursuit of controlling traffic to suspect file sharing sites. These efforts have implications to “net neutrality”, or the belief that all traffic on the Internet should be treated equally. The Federal Communications Commission has already signaled its intent to regulate how Internet providers are allowed to manage traffic on their networks. This has the potential to shape some of AFN's network management options, such as utilization-based rate structures and download usage limits.

Distribution Infrastructure

The 2009 American Reinvestment and Recovery Act's (ARRA) Broadband Stimulus program defines “broadband” as a terrestrial data delivery service capable of speeds of at least 768 Kbps downstream and 200 Kbps upstream. The four current technology standards capable of providing data at those service levels are Digital Subscriber Lines (DSL), Hybrid Fiber-Coaxial (HFC), Passive Optical Networks (PON), and Worldwide Interoperability for Microwave Access (WiMax).

Ashland Fiber Network's network architecture is a Hybrid Fiber-Coaxial design. This mode is the type of system almost all cable companies operate on. AFN is also designed to accommodate the future deployment of a PONS network, if needed. Passive Optical Networks use an unpowered fiber-to-the-premise architecture. DSL services are provided by local incumbent local exchange carriers (ILEC) like Qwest, and offered either directly to customers or through resale agreements with competitive local

exchange providers (CLEC) who lease Qwest lines. Some AFN ISP partners offer DLS via leased Qwest services.

WiMax wireless services operate either in private spectrum or in shared spectrum licensed by the FCC. Locally, ClearWire is providing this type of service north of Ashland. Ashland Fiber Network has a license for service in the 3.65 MHz spectrum and has had the deployment of WiMax services to Ashland customers as a primary project for three years.

The City's hybrid fiber-coaxial system consists of approximately 25 miles of fiber connecting neighborhoods, 118 miles of coaxial cable connecting home and business structures, three primary antennas supporting WiFi service in the downtown area, and one WiMax antenna piloting a new service. Organizationally, the City's Information Technology Department completed a skills inventory and reviewed workload requirements in May 2010. That assessment showed AFN to have the required skills to meet existing performance metrics and the expertise to manage AFN through designs planned through the end of 2013. However, as a small organization, there are skill areas related to physical fiber maintenance for which AFN needs more depth and must adjust. The workload related to Public Utilities Commission correction work is also expected to decline, which will shift staffing priorities in the future.

Capital Infrastructure Planning

In June 2010, AFN completed its tentative three-year system plan for the telecommunications utility, pending approval of AFN's business plan by the Mayor, City Council, and the City Administrator. The system plan sets future infrastructure performance metrics to ensure AFN's service quality, migration to an updated architecture and associated technologies, staff training requirements, and a schedule for AFN's capital investments.

Of key importance in AFN's System Plan are the network's lifecycle and eventual transition to all-fiber communications as triggered by increasing demand for high-bandwidth online services—e.g., consumer and business utilization of data-heavy spatial mapping, high-definition Internet movies, Internet-based television, and social networking applications. Per the system plan, AFN will need to begin investing more into full fiber-to-the-premise services over the coming four years to remain viable. Beginning early will spread the cost across years and allow the cost to be covered by annual revenues as much as practicable.

Hybrid Advantages

The City of Ashland is fortunate Ashland Fiber Network's design was architected as it was. Fiber optic technology was considered somewhat "future-proof" at the time of AFN's construction. Fiber carries full-spectrum capacity, against which nothing is faster. The hybrid design avoided the full cost of a much more expensive all-fiber system for which demand did not yet exist.

Ashland took a progressive design step in implementing a fiber-based core for its system, thereby ensuring AFN could handle future bandwidth demands that were unknown at the time. Staff, consultants, and the AFN Technical Advisory Group comprised of local experts that assisted the City in setting AFN's technical design deserve credit for a solid foundation that has withstood the tests of ten years of operation. In matching telecommunications industry trends, AFN has also followed the forward end of the telecommunications industry. The costs for keeping the infrastructure current have been moderated by being in-step with industry demands. Some companies and local

governments have had much higher hardware and consulting costs because of bleeding-edge designs.

Management Direction

Defining Ashland Fiber Network's strategic and tactical direction directs the utility's human and financial resources towards defined outcomes.

Strategic Goals

Staff met with the Mayor, City Council Members, and the City Administrator to assess views on the direction Ashland Fiber Network should take. Common historical and forward-looking themes arose, centering on financial stability, paying AFN-related debt, connecting community members, and operating efficiently. With this input, the following general goals for AFN were defined:

Financial Stability

Operate Ashland Fiber Network as a government enterprise. Cover operating expenses and capital investments within the operating budget generated through revenues. Manage products and rates to be competitive with other alternatives in the community.

Contribute to Debt Service

Contribute to the Ashland Fiber Network debt service to minimize the burden on the City's General Fund and individual department funds to the maximum extent possible. At the same time, do not compromise effective operation and maintenance of AFN as a City asset. Aim to pay 33% and, if possible, 60% of the annual 2004 bond payment as the portion directly attributed to AFN's start-up costs.

Community Access

Provide a basic level of access open to all members of the Ashland community. AFN should not charge users for the service that connects the community in addition to taxes and fees already paid into the City. Community Internet access should include wireless access methods.

Community Coverage

Complete Ashland Fiber Network to cover 99% of the community's boundaries, minus locations wherein property owners elect not to have Ashland Fiber Network physically present.

Contribute to City Operating Costs

Pay City of Ashland internal services charges on par with peer departments. Share in these expenses to allow tax revenues to go towards primary municipal programs to the maximum extent possible.

Derived Summary Strategic Goals Statement

- 1) Serve as a self-sustaining public utility
 - a. Introduce new products and services to increase revenues to pay for AFN's operations, capital investments, and a set portion of related City debt service.
 - b. Stabilize revenues for core business to exceed \$1.9 million annually.
 - c. Increase AFN-debt share to at least \$460,000 of the City's \$1.4 million annual payment.
 - d. Reduce bandwidth costs by at least 50% from Fiscal Year 2010 rates.
 - e. Reduce overall operating costs by at least 5%.

- 2) Serve as a community resource
 - a. Build AFN into a central community resource for information.
 - b. Provide community Emergency Notification System with at least 10,000 enrollees.
 - c. Provide a basic level of Internet access to Ashland residents at low-cost.
- 3) Drive increase in market share
 - a. Charge rates competitive with alternatives Internet service providers.
 - b. Achieve and sustain an Ashland market share of at least 50% of homes.
 - c. Improve infrastructure to enable Internet service at 98% of Ashland properties at speeds of 1 Mbps or more.
 - d. Maintain a customer churn rate of 20% or less.
 - e. Use utilities connections to improve telecommunications customer acquisition resulting in at least 300 customer subscriptions per year.
 - f. Provide prices and services that meet or exceed the needs of Ashland citizens and businesses.
- 4) Provide customer service excellence
 - a. Achieve customer service scores at or above 60% rating AFN-related as “Good” to “Excellent” based on surveys.
 - b. Improve service sign-up and support processes with Business Service Partners to capture at least 50% of new service inquiries received by AFN.
 - c. Ensure infrastructure meets 100% of defined performance and quality metrics.

Core Values

- 1) AFN values its customers also as citizens, neighbors, and owners. We will treat them with kindness and respect.
- 2) We are stewards of public resources. This helps us focus on providing a superior service, working responsibly, and achieving reasonable costs.
- 3) As Ashland’s telecommunications utility, the work we do, services we provide, products we sell, and investments we make should first and foremost enhance the local economy.

Financial Sustainability— $R \geq OE + C + D$

Beginning in Fiscal Year 2011, managers of Ashland Fiber Network will conduct their duties within the tenets of meeting financial goals and serving as stewards of AFN. AFN management views the telecommunications utility as a community resource belonging to the Ashland community.

- R – Revenues generated from all AFN operations must equal or exceed its costs.
- OE – Operating Expenses incurred from the operation of AFN, including staff salaries and benefits, bandwidth charges, allocated internal service charges, and other normal expenses for services and goods used.
- C – Capital investments made into the asset that increase and/or maintain its value.
- D – The portion of annual debt service payment assigned to AFN.

Stewardship

1. Provide services that are competitive with alternatives available to the citizens and businesses of Ashland. If there is a prevailing service need in the community that other companies do not offer, strive to meet that need at an economical cost.
2. Maintain prices that are competitive with alternatives available in the region.
3. Provide superior customer service to differentiate AFN from alternative services.

4. Ensure AFN’s infrastructure meets the high performance and quality metrics defined for it.

Pricing and Product Differentiation

- 1) Ashland Fiber Network cannot compete with larger service providers on the basis of price. Economies of scale for regional and national telecommunications companies are significant.
- 2) AFN will succeed on the basis of the product it sells—superior customer service, reliability, local economic impact, and performance.

Alignment with City Council Values

Participatory Government	Ashland Fiber Network will support open, accessible, honest, and democratic government through providing low-cost community Internet in City limits. In addition, the AFN website will serve as a channel to access the City of Ashland website, municipal services, and community resources. AFN will be efficient and effective with public funds by executing its work plans effectively and by serving as a good steward of financial resources.
Low-Cost Expression	By providing low-cost Internet access and having citywide coverage, Ashland’s citizens and visitors will have the ability to exchange diverse ideas without restrictions long social and economic lines. In that way, creative contributions of the arts, cultural activities, and community events will be supported.
Diversity	AFN will work to encourage an open environment among its business partners to include all businesses. Local business participation in AFN is also valuable due to its ability to keep dollars in the community.
Economy	The local telecommunications utility supports the Ashland economy by attracting and retaining businesses to the community that depend on advanced telecommunications services. With AFN’s business partner model, the utility nurtures home-grown business and to connects consumers to local products, services, arts and culture, and educational institutions. In helping local businesses succeed in providing good wages and economic choices for individuals and families, AFN also supports high-quality public services resulting from tax revenues and the participation of more residents in their government.
Distinctiveness	Ashland Fiber Network is a rare and progressive community for taking the step to steer its own growth by creating a community-owned telecommunications utility. Regardless of any struggles, AFN continues to work through partnerships with local businesses to meet the telecommunications needs of Ashland’s citizens, businesses, and visitors; it represents an innovative approaches Ashland took to chart its own course.
Education	AFN will continue to support education in the community for its social, economic, cultural, and civic contributions.

Basic Needs

The community telecommunications utility will support emergency notification messaging to Ashland’s residents.

Community

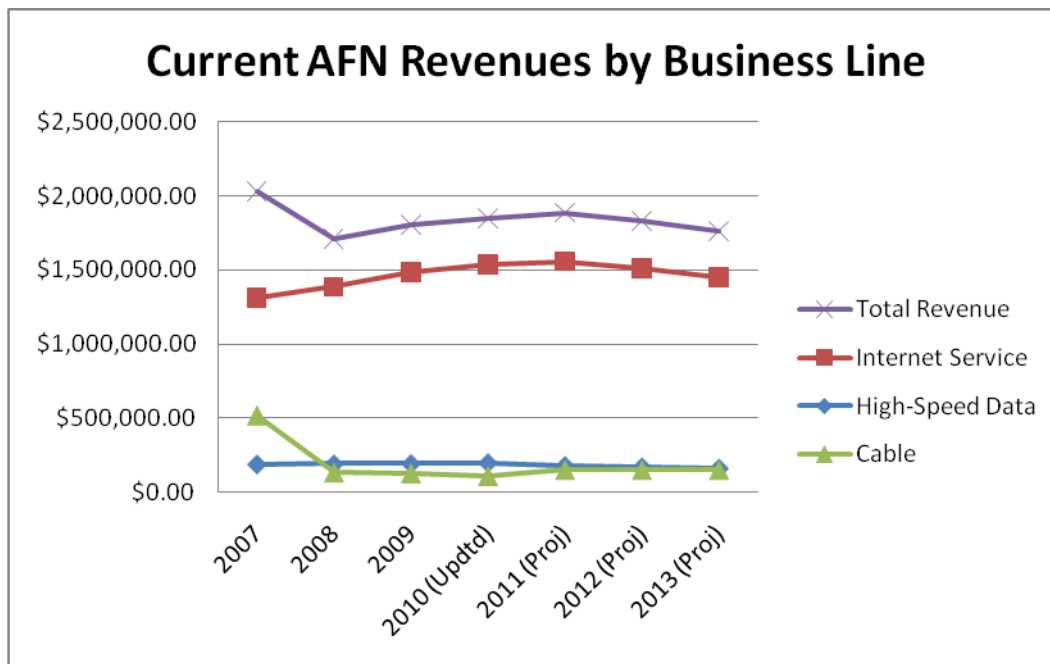
Ashland Fiber Network strives to be a part of what makes the community a unique and special place, with residents that participate in their community and feel a sense of belonging. When AFN succeeds, residents can communicate better, look out for each other, and support those in need.

Business Planning

Summary Analysis

Historical Financial Performance

As of Fiscal Year 2010, approximately 84.6% of AFN's revenues derive from its wholesale Internet business line. High bandwidth costs are beginning to hurt the margin between Internet service revenues and associated costs of goods sold. The overall revenues from this business line have the potential to fall in the coming years based on introductions of high-speed wireless options from cellular carriers and marketing efforts by companies offering various high-speed alternatives. Because such a large proportion of the telecommunications utility's total revenues come from this business line, AFN is especially sensitive to major changes in the industry that affect Internet service prices and costs.



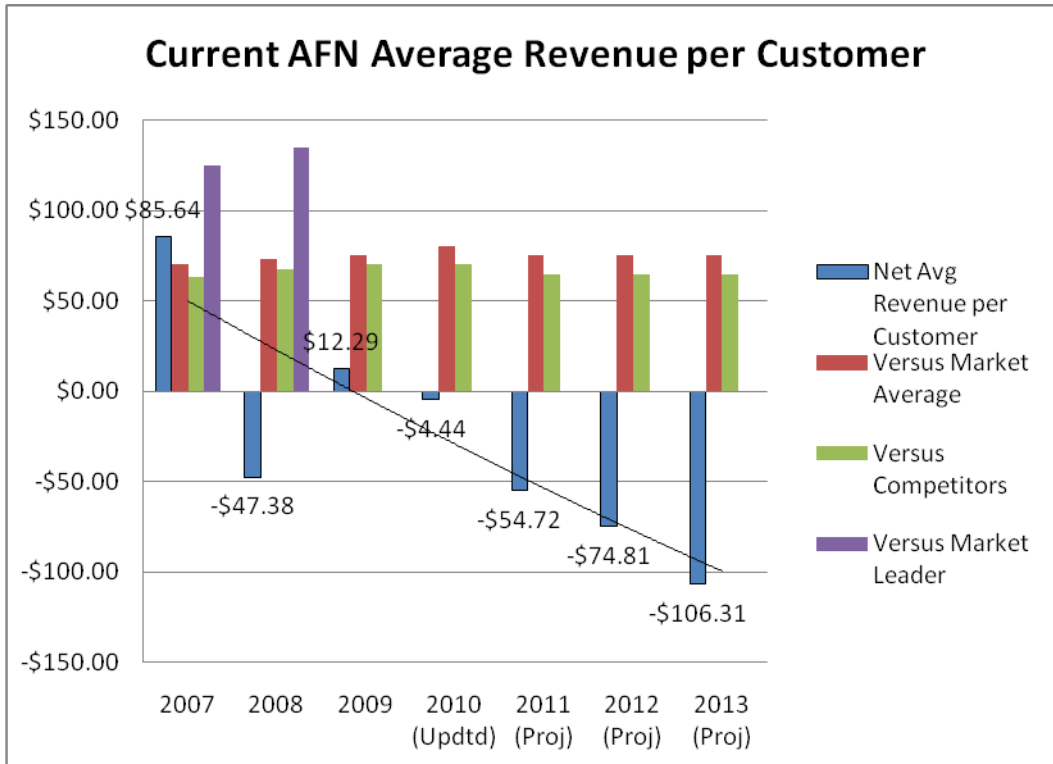
	2007	2008	2009	2010 (Est)	2011 (Proj)
High-Speed Internet	9.3%	11.2%	10.6%	10.8%	9.5%
Internet Service	64.5%	81.1%	82.3%	83.4%	82.5%
Cable	25.5%	7.7%	7.0%	5.8%	7.9%
	0.7%	0.0%	0.0%	0.0%	0.0%
Total Revenue	100%	100%	100%	100%	100%

Average Revenue per Customer

Net Average Revenue per Customer (net revenue divided by total number of customers) is a common telecommunications industry metric for assessing business performance. Under this measure, Ashland Fiber Network has a weak performance history. Accounting for 2007 figures that are distorted by a partial year of offering cable services in-house, the City's telecommunications

utility has a history of negative average revenue. This is true despite minimal capital investment in the past three years.

From a net of \$85.64 per customer in 2007 that resulted from outsourcing cable television operations, AFN generated a loss of -\$47.38 per customer in 2008, a positive \$12.29 per customer in 2009 (due to almost no infrastructure investment); and -\$4.44 per customer in 2010. Looking at revenues and expenses in detail, the 2010 figure reflects higher costs for Internet bandwidth, recovery of bad debt, and delays on infrastructure upgrades related to new services.



The -\$54.72 per customer loss projected for Fiscal Year 2011 results from \$233,500 in planned capital investments, some of which was carried from Fiscal Year 2010. This is a drastic shift from the minimal investments made between 2008 and 2010. Average Revenue per Customer would be \$0 per customer without the larger required capital line. These figures exclude an additional \$344,000 AFN is contributing to debt payments from reserves. The Average Revenue per Customer metric would show a -\$134.72 per customer loss if payments from reserves were accounted for as an operating expense.

Comparing AFN’s Net Average Revenue per Customer metric to industry standards underscores how AFN’s performance has lagged against industry benchmark leaders, averages, and companies that vie for the same customers as AFN (Charter and Qwest). More important however is the long-term trend: In its current form, AFN is a declining business. Cost pressures from personnel, bandwidth, overhead and debt, and the need for capital investments would otherwise make Ashland Fiber Network a non-viable business beyond the three year horizon as Average Revenue per Customer losses exceed -\$100 per customer, beginning in 2014.

Debt

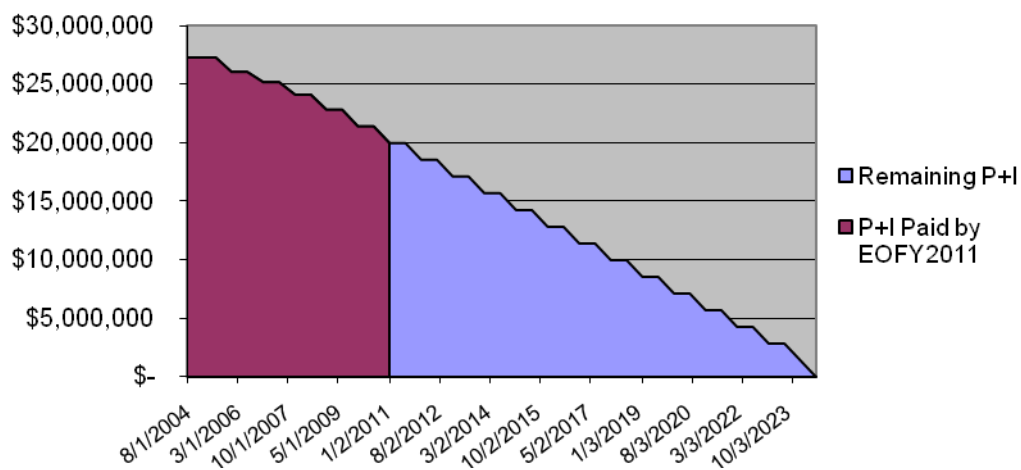
The City has a large debt outstanding that directly relates to constructing and operating Ashland Fiber Network. In 2004, all construction costs from two bank loans and operating losses funded through internal borrowings to that time were refinanced with a \$15.5 million bond issue pledging the City's full faith and credit, which is its ability to pay with any legal revenue stream including property tax proceeds.

The components of the financing were \$9.3 million in construction and \$6.2 million to cover losses and issuance costs. The interest rate was the best the City of Ashland could have achieved at that time, even with a municipal guarantee, due to the performance of the enterprise to date, instability of the industry, and complexity of the operations requiring the issue to be a taxable rather than tax-exempt financing.

The annual debt service of \$1.4 million is distributed to the City's General Fund and all utility activities with AFN paying \$356,000 in the earlier years and \$700,000 budgeted in FY 2011. The higher amount is from ending fund balance that was generated by the 2004 refinancing, but was maintained through AFN operations. The higher contribution cannot be relied upon in subsequent years without depriving AFN of funds needed for operations and capital costs, so other sources must be identified.

Since AFN "grew" out of the Electric Department, this fund has always been considered "first in line" in guaranteeing AFN's debt, even after the 2004 refinancing. In 2008, the City decided to use a \$636,000 refund on wholesale power purchases from Bonneville Power Authority to assist in paying the debt service in fiscal years 2009 and 2010. The Electric Fund currently contributes \$252,300 toward the debt each year and has made operational transfers to support AFN on several occasions. If AFN went back to an annual \$356,000 contribution towards its debt and the difference was absorbed by the Electric Fund the impact on rates would be in the 2.3% to 2.5% range.

2004 Bond for AFN-Related Costs



In the event AFN were not able to continue as a viable business, revenues would cease to be generated to help cover payments, as well as the general and administrative costs allocated to City departments through a cost accounting model. The full impact of central services charges and AFN-

related debt would consequently be placed completely onto the City's General Fund and all utility activities. The importance of Ashland Fiber Network's reorganization should be understood in that context.

The critical fact is Ashland Fiber Network has a large debt load for a utility of its size. The City does not have an opportunity to refinance this debt at this time due to market constraints and an inability to improve interest rates on the bond. Hence, AFN's financial history will continue to affect its decisions and direction.

Strengths and Opportunities

Ashland Fiber Network has strengths that make a business model focusing on revenues from new services possible. The Ashland area has partners who can work with AFN to offer services nearly all other small cities could not. A largely built-out and stable infrastructure, along with a high entry cost for any potential new providers, creates a defensible business position.

AFN's reputation for superior customer service is a forte that it can capitalize on to differentiate its products and services beyond price competition. Similarly, AFN can differentiate itself as a *community* telecommunication utility if it can effectively communicate the benefits of keeping dollars in the local economy, supporting local businesses, and sustaining municipal services. The community role of AFN is an asset that is special to Ashland—the success of food banks, food cooperatives, and community events indicate sophisticated consumers who make decisions based for reasons beyond simple price. Those types of consumers can understand and support AFN for broader economic reasons. This may be one reason why AFN has experienced low customer churn rates for years.

With respect to opportunities, the telecommunications industry is in a period of especially rapid change. Innovation creates both new business prospects and unfamiliar risks that must be managed. One certainty is that AFN has the infrastructure to support the level of bandwidth demands expected in the coming years. Updating hardware to use the newest cable modem technology standards (DOCSIS 3.0) create the capacity for services speeds of up to 50 Mbps are AFN's next progression in its system plan. High-speed WiMax services are an opportunity area with incredible potential for AFN and the Ashland community in terms of community coverage and new revenue.

Ashland Fiber Network's cable television services contract and franchise are up for renewal in late 2010. The opening exists to modify service to be more competitive with alternative products available to Ashland's residents. For example, adding an option for high-definition channels makes AFN-based cable services at least competitive and will help mitigate the customer losses AFN's current vendor is experiencing. Related, the contract may also address options for adding an on-network IP-television solution to hold ground in the emerging and critical Internet-TV battle. An on-network solution would help control bandwidth costs by reducing the amount of television traffic that is point-to-point uni-cast, with a more efficient multi-cast model.

One recurring debate affecting AFN's future is the decision to sell Internet services directly to customers, or through partners. On one side are increased revenue margins from eliminating the share paid to IPS partners. ISPs do not offer the same value as when customer depended on dial-up servers, an entry portal, and email accounts—e.g., America Online and CompuServe of old. On the other hand, some ISPs offer computer support in addition to Internet access. ISP partners are often more agile in bringing new services to market and acquiring new customers than a government agency. Whether to use partners to sell AFN services will likely remain an issue of contention, but

AFN's most direct route to adding revenue through new services is through strong partnerships with local companies like its existing partners that can help meet the needs of Ashland consumers.

Offering low-cost community Internet access is a novel direction that has been debated in Ashland Fiber Network's history. It seems a natural direction for a resource aimed at economic development, having a connected community, and encouraging public participation in government and public events. Low-cost service is representative of the natural conflict for an agency that must be both a public service and supported by its revenues. All this said, AFN has the chance to offer a very basic level of service low-cost of charge to residents and visitors and meet its connected community charter provided it can (1) achieve significant reductions in bandwidth costs and (2) employ low-cost access as a means of introducing users to additional services and products that generate revenue.

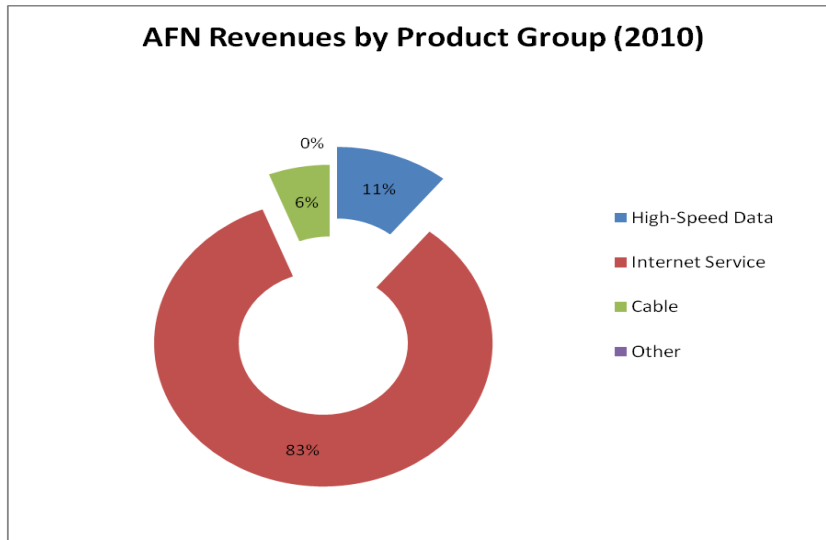
Weaknesses and Threats

A primary weakness for Ashland Fiber Network is its limited customer base. The fact that Ashland has less than 15,000 households eliminates most growth and volume strategies. It also limits economies of scale that regional and national providers can achieve. Another weakness is the indirect branding of AFN with ISP partners. The confusion some customers have regarding their relationship with AFN detracts from the product differentiation that will be pursued heading forward in that it detaches AFN's connected community and public resource goals from its products. That weakness must be corrected in the coming months.

The core of a new revenue business strategy fitting a limited market is the introduction of additional and high-quality products. In this area, AFN has significant internal weaknesses. Budgeting and hiring processes are structured for transparent government and not speed, compensation practices are less incentive-based, personnel costs are much higher, and hiring/releasing staff to meet fluctuating consumer demands is not practical. This connects to the essential role of partners to create products and services to sell, and the strength AFN has in those types of vendors being at its disposal. As an example, AFN already has the partners to offer the bundling of cable television, Internet, and telephone services. The telecommunications utility's partners have simply not had adequate incentive to partner with each other to assemble those packages for sale. The result has been lost revenue and customer attrition that can be prevented in the future.

The merging of consumer and businesses products in AFN's rates and charges is another primary weakness. As usage patterns and service requirements differ between those customer segments, product offerings should be made to fit. This can help improve revenues by creating an easy path to additional services the customer may need to support their business operations that are beyond simple Internet access—e.g., IP telephony, website development, backup services, and online store hosting. A related weakness is the lack of coverage in areas, inhibiting potential revenues for the unsatisfactory reason of lack of access.

Internal weaknesses center on the mixed operations of Ashland Fiber Network and the City's internal IT service division, producing some confusion in resource allocation. The ability to create redundancy across operations is still possible, but must be accounted for appropriately for improved resource decisions from IT and AFN managers. The concentration of revenues in Internet service provision is another weakness that is addressed with the new services revenue strategy. As those revenues grow, AFN's sensitivity to Internet service rates also decreases. For example, a major drop in Internet service prices would cause severe revenue issues for the telecommunications utility.



A last but nonetheless critical fault is public perception. An almost habitual reference to AFN as “debt-ridden” must change. A customer who believes AFN is a liability to the community will struggle to also believe it is a positive community resource, which negatively impacts AFN’s product differentiation in marketing. Positive progress and economic impacts, along with a restructured presentation of AFN debt in the City’s budget process may be the only means of addressing that perception.

Central to AFN’s weaknesses and threats analysis is its operating overhead and debt costs. As with any business, controlling these factors is an essential element to the success of the business. At the same time AFN takes on more of the annual payments on the 2004 bond issue than in previous years, it must be recognized that those liabilities are a systemic drag on AFN’s bottom line. That is not to say AFN bearing a significant share of those costs is not appropriate, nor at what level. Simply put, it is a real but necessary weakness.

Critical bandwidth consumption and cost, threats from emerging technologies, risks associated with business planning in a public setting, and the potential negative impact of the broader economy are addressed in more detail in other parts of the AFN Strategic Business Plan and its appendices

Options

Option 1—Sell AFN

The option of selling Ashland Fiber Network has arisen at numerous points in the utility’s history. Businesses and community members have contacted the City of Ashland about purchasing AFN as recently as early-2010. However, the option is appealing only to the degree it allows the City to concentrate on traditional municipal services, reduces the City’s long-term liabilities, and retains the positive economic effects of having strong competition for advanced telecommunication services.

Valuing businesses for sale can be a very complex analysis. Standard valuation methods fall into three general categories: (1) value of the physical assets of the business, (2) value based on a multiple of the net revenues the business has achieved, and (3) value as determined by an industry-standard metric. It must be understood that value analysis is inexact. Ultimately, a business is worth whatever a buyer will actually pay for it based on their own assessment of the performance of the business and its fit with the buyer’s other services and/or products.

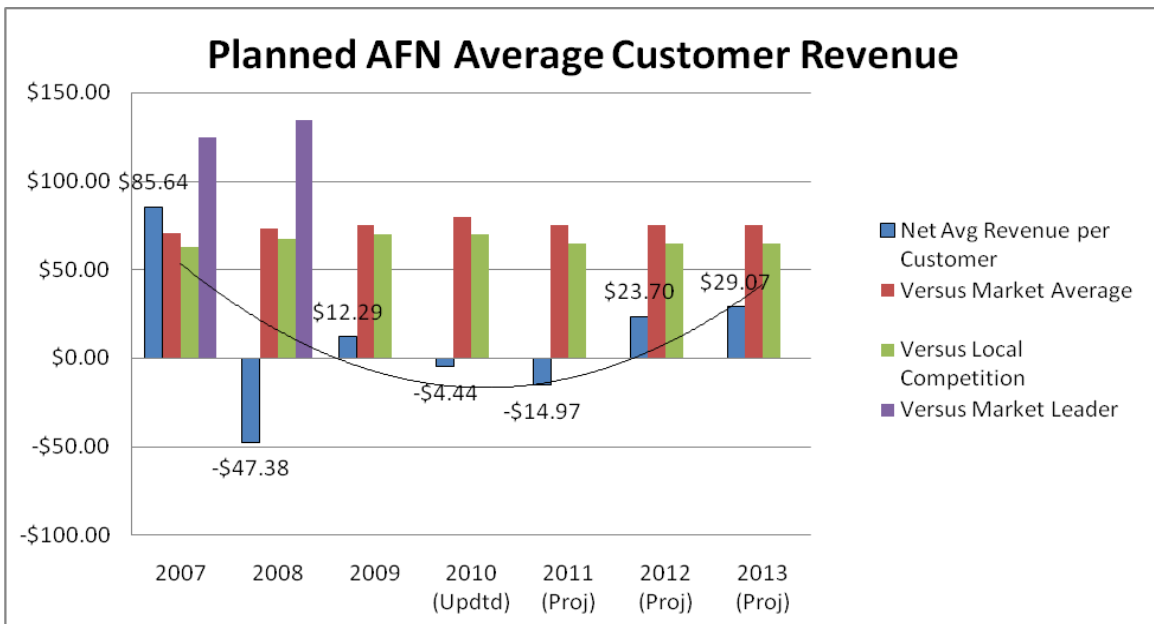
The following valuations assume that the City would receive full payment from a buyer upon conclusion of a sale, and that all proceeds from the sale of AFN would immediately be applied to paying down or paying off the City's 2004 bond issue. In the cases of franchising AFN and continuing its operations, figures are unadjusted for inflation due to the current exceptionally low rates, unknown volatility, and potential for deflation.

Transaction Type	Net Return	Notes
Sale on Value of Assets	-\$9.3 million	Sale price minus debt P&I
Sale on Value of Income Multiple	-\$7.9 million	Sale price minus debt P&I
Sale on Value of Customers	-\$9.0 million	Sale price minus debt P&I
Franchise/Lease Operations	-\$12.7 million	
Continue Operations	-\$6.8 million	

As depicted, the City of Ashland has no net-positive options. However, the value of a sale fluctuates with the market. The option exists for the City of Ashland to look at selling Ashland Fiber Network at a later date and for a higher price if AFN's reorganization is successful.

Option 2—Restructure AFN for Revenues from New Products

Continuing the operation of Ashland Fiber Network is the City of Ashland's optimum alternative based on analysis of sale, franchising, projected revenues, and risks. In many ways, the reality is the City cannot afford to sell AFN and must realize the best possible return by maintaining the business for the foreseeable future. However, because of industry trends, continuation must be accompanied by a business plan that finally achieves revenue growth, realizes significant reductions in the cost of operations, and preserves the value of AFN's infrastructure as the utility's means of offering the telecommunications services customers pay for.



The plan presented here has the potential to reverse a long trend of losses in Ashland Fiber Network's history. An important fact is that under the business model in place, AFN has lost money

in eight of ten years of operation. Mitigating this fact is that the positive year in 2007 resulted from an accounting change, while the positive year in 2009 resulted from cancelling investments into the network infrastructure.

Forecasts

The following business forecasts are for Option 2 as the City of Ashland best alternative for Ashland Fiber Network. Expenses are projected using most-likely scenarios and with changes to operations that are complete, in-progress, and planned. Conversely, estimates for revenues are given in ranges due to inherent uncertainty associated with customer adoption of new product offerings.

Expenditures

AFN Management anticipates decreased personnel and benefits costs in 2011 due to the reduction of one position, along with substantially higher capital costs associated with implementing new services and updating the systems supporting customer modems. In FY 2012, a planned staff reduction of an additional 1.0 FTE is represented in the Personnel line, partially offset by increased benefits costs and contract work to cover variable needs. Capital expenses remain at relatively stable levels in FY 2012 and FY 2013, leading up to projected increase in demand for speeds requiring fiber to the premise (FttP) services.

Operating expenses in FY 2011 are presumed to stay stable with expected savings on bandwidth balancing the costs of AFN's low-cost service and increased overall usage. Total bandwidth costs are projected to jump in FY 2012 as a critical mass of customers transition to Internet-based television and movie options. That market is also expected to stabilize on a smaller number of alternatives, but with unknown options for on-network offerings. By FY 2013, projections for bandwidth utilization stabilize at a lower rate of growth.

Expenses	2010 (Updtd)	2011 (Proj)	2012 (Proj)	2013 (Proj)
Personnel	\$552,685.00	\$584,548.00	\$551,700.00	\$595,000.00
Operating (with Bandwidth)	\$874,323.00	\$834,157.00	\$953,900.00	\$994,000.00
Debt	\$356,000.00	\$356,000.00	\$356,000.00	\$356,000.00
Capital	\$82,300.00	\$233,500.00	\$147,500.00	\$128,100.00
Cost of Service	\$1,865,308.00	\$2,008,205.00	\$2,009,100.00	\$2,073,100.00

Revenues

As proposed, AFN's revenues are projected in the table, below. Revenues from the high-speed data business line that primarily serves local business are expected to drop from preceding levels as other options catch up in speed and become reasonable alternatives. Small growth is viewed as likely long-term, with development activity in Ashland playing the major role in determining whether revenues will be closer to minimum or maximum projections.

If AFN is successful in its marketing approach and with its low-cost Community Connect service, low growth is expected for the Internet Service line that includes wholesale services. Though customer share is projected to increase, margins will decrease due to competition and declining prices.

The Wireless services business line carries AFN’s greatest immediate potential growth, which is expected to increase from about \$6,000 today to between \$25,000 and \$40,000 a year in 2013. This growth could be higher, but is limited by antenna requirements consumers will encounter.

AFN’s Consumer Services business line represents its share of sales of additional services provided by business partners that contract with the City. This part of AFN’s business is the least predictable until AFN completes its contracts with partners and assembles its portfolio of new product offerings.

Revenue	2011 (Proj Min)	2011 (Proj Max)	2012 (Proj Min)	2012 (Proj Max)	2013 (Proj Min)	2013 (Proj Max)
High-Speed and Business	\$180,000	\$190,000	\$171,000	\$190,000	\$165,000	\$190,000
Internet Service	\$1,550,000	\$1,750,000	\$1,700,000	\$1,920,000	\$1,800,000	\$1,975,000
Cable	\$175,000	\$250,000	\$202,205	\$250,000	\$204,799	\$250,000
Wireless	\$22,000	\$30,000	\$30,000	\$40,000	\$30,000	\$40,000
Consumer Services	\$11,650	\$15,000	\$29,300	\$35,000	\$38,000	\$50,000
Other	\$700	\$5,000	\$1,000	\$5,000	\$1,000	\$5,000
Total Revenue	\$1,939,350	\$2,240,000	\$2,133,505	\$2,440,000	\$2,238,799	\$2,510,000

Operating Plan— Year One

New Internet Bandwidth Contract

A new Internet bandwidth contract must be competitively bid out to procure bandwidth services in place of the City’s current expiring contract. The new contract sought will be structured with a base number of years, with one-year extensions at the City’s discretion. Renewals will be based on performance on defined metrics, reductions in bandwidth costs, vendor cost, solutions that generate savings, and meeting the general terms and conditions of the contract. The awarded vendor will also be responsible for providing periodic reports and evaluations, allowing for opportunities to update services and expenses.

Bandwidth represents a critical component of AFN’s operating expenditures. Accelerated growth in the cost of bandwidth has the potential to outpace revenues and make AFN unable to meet its financial goals. It is imperative that expense reductions are renegotiated to reflect projected open market declining rates. Furthermore, the new contract will move away from prescriptive designs and evaluate on the basis of performance metrics and the technical migration plan submitted to move from existing services to new ones, as required by the bid. In so doing, AFN wishes to capitalize on the creativity of potential vendors to produce more cost-effective solutions. The goal of this RFP will be to reduce costs by at least 50% by the last year of the contract.

New Cable Television Contract

AFN must execute a contract that better captures the costs of maintaining the cable television infrastructure and staffing for installations. AFN management will look to increase the value of the contract along these lines. Together with Franchise Fees required from all of the City of Ashland’s cable operators, the Request for Proposals (RFP) planned for release in August 2010 will require cable television services be offered to Ashland residents with fees that cover costs. Goals for negotiations are as follows:

Cable Lease	2011	2012	2013	
Staff	\$ 83,940.06	\$ 86,458.27	\$ 89,052.01	1 FTE (Sal + Benefits) (Non-Lead Rate)
Space	\$ 18,200.00	\$ 18,200.00	\$ 18,200.00	\$1,500/ mo Space Rental + \$200 Access/Security
Infrastructure	\$ 85,440.00	\$ 85,440.00	\$ 85,440.00	\$7,120/mo Network Capital and Operating Maintenance Share
PUC/Regulatory	\$ 12,106.74	\$ 12,106.74	\$ 12,106.74	Tickets * Hours * Hourly Rate
Total	\$ 199,686.80	\$ 202,205.01	\$ 204,798.75	

An additional priority will be to ensure Ashland’s residents have robust choices in cable television programming, such as digital channels, high-definition television, personal video recorders, and other services currently not offered by the City’s vendor due to the analog signal restriction in the existing lease.

New Business Services Partner Contracts

Current ISP partners have been allowed to operate without a contract with the City of Ashland and AFN for more than two years. This must be rectified and also redefine AFN’s vendor relationships. The ability of business partners to offer the value-added services AFN’s strategic business plan requires is essential, as is AFN’s access to some customer and usage data.

Based on historical performance, AFN will need to incorporate terms and conditions to protect the City legally and financially. Terms will define requirements for on-time payments to AFN, sharing customer data, and relaying timely messages to customers for special events and maintenance work. Additional potential terms to negotiate include agreements for advertising support and contractual incentives for customer and revenue growth.

Contingency

The primary contingency direction is for AFN to pursue a single contractor to handle those services AFN cannot perform cost-effectively on its own. The amount of time to turn the telecommunications utility’s operations around for the long-term is limited. In the event that (1) master contract negotiations reach an impasse with partners or (2) the multi-partner model fails to show significant revenue and market share improvements, the contingency would need to be activated.

AFN would issue a request for proposals to acquire one partner to render all customer acquisition, marketing, and user support. This model would likely speed revenue and market share improvements. However, it deviates from the goal of AFN to broaden opportunities to additional businesses in the community. It also moves AFN into the position of offering services as a direct retailer.

Implement New Rates and Products

AFN offers a range of Internet product packages. Heading into the 2011 fiscal year, AFN will broaden its services catalog to offer more value-added options through its vendors. This is anticipated to grow revenues outside of AFN’s commodity wholesale Internet service business line. This presents the best option for AFN to balance the cost pressures of bandwidth consumption, price pressures of alternative

products, reduce revenue source risk, and meet goals set with the Mayor, City Council, and City Administrator.

The following Products and Rate Structure will combine to permit AFN to provide a low-cost, very basic access level, full community coverage, and strong customer service while transitioning towards a use-based rate structure that is more sustainable.

Products and Rates

Past rate models use broad categories more suitable to an Internet environment that once had few high-bandwidth options for consumers. Today, Internet television, downloadable movies, and massive multi-player online games are ubiquitous and consume bandwidth at far greater levels.

The new rates and charges model proposed links Internet usage with the costs of the service and that provides product options for defined types of consumers. This constitutes a major shift from the current approach in recognizing consumer needs differ from businesses needs through a cost difference. For example, business accounts tend to have more users and require faster response when support issues occur.

Service packages allow customers to quickly identify and align with the services they require, along with options to customize the service if added value is perceived. The reintroduction of consumer versus business pricing will better match utilization with costs. Related, the recent introduction of rate structures with usage caps by AT&T, Comcast, Verizon, and others makes AFN's transition consistent with what customers are seeing elsewhere.

The proposed rates structure is projected to save more than 80% of customers money. However, it has the important potential to increase revenues as some customers opt for advanced speeds and services to support their changing needs. AFN management expects resistance from some existing ISP partners in enacting this change. Ultimately, the change is consistent with the market and with competitors such as Comcast, AT&T, and Verizon. It also aids AFN in controlling excessive use by a small number of customers who can impact network performance experienced by many users. AFN and ISP partners will need to work together to introduce and support the new rate structure in a coordinated manner.

The rates Ashland Fiber Network's Business Partners pay will change. AFN averages over 70 installations per month, for a total of approximately 840 new installs per year. AFN management will look to update rates to reflect actual costs when setting new rates. Similarly, AFN will appropriately charge when a Business Partner incorrectly refers a customer support call to AFN staff as a network outage issue receiving priority response.

Wholesale/Partner Contract Option

Ashland Fiber Network has traditionally viewed vendors serving as ISPs as full partners. This has proven impractical at various times as some vendors offer competing services and have internal company rules that inhibit acting in mutual interest on critical decisions. For example, one current ISP partner has a policy that prohibits sharing customer data with AFN. Another ISP partner has a policy prohibiting co-branding in marketing efforts, thereby blocking any direct relationship between AFN and consumers of its services.

To accommodate the long-term ISP partners while also providing a path towards revenue and market share growth, AFN management will implement a two-tract contract arrangement. Under the first tract, AFN will serve strictly as a wholesaler. Vendors under this “Retail Option” will have no requirement to include the AFN brand in their marketing and sales, nor be required to share any customer information to AFN other than modem and service package. AFN would not take any service calls from vendors’ customers and would be charged for installations, disconnects, and customer account reactivations.

The contract’s second tract will be the “Partner Option”. Under this, the vendor and AFN agree to work in full partnership—marketing efforts would include both the vendor’s and AFN’s branding; customer and data sharing will exist; an incentives structure will be implemented to help partners grow; and partners would have representation on AFN’s Executive Advisory Board. Existing and potential customers will be directed to only Partner Option vendors, including customer contacts via the AFN website, when signing-up for utility services, and when AFN receives requests for service upgrades and bundles. AFN will work with the City of Ashland’s Administrative Services Department to also offer the ability to integrate vendor service billing with the City’s utilities billing processes as a means to reduce waste.

New Services

New services are intended to meet the needs of Ashland’s citizens and businesses. Executed well, this differentiates AFN’s product from others by giving options that local customers demand and by meeting needs other providers do not.

AFN must balance most new product offerings to justify investments made through a thorough return on investment analysis for each service. Other service additions simply keep AFN equal as an option to other providers in the eyes of customers. The following services are a mix of products and services that equalize AFN with other providers and others are focused on more as new revenue generators.

Implementing the new product catalog supports reversing the current trend of declining revenues by forming AFN into a value channel that generates additional business and through limited new customer acquisition and more services per customer. At the same time, compared to private-sector telecommunications companies, AFN’s Average Revenue per Customer will likely remain below average due to the low-cost Community Connect service and other operating cost constraints.

- **Community Services**—Available to Citizens at No Additional Cost

- AFN Community Connection

- Slow speed
 - Very low-cost
 - Opening AFN Access webpage
 - Feeds into Community Portal Page
 - Customer data protected

- Ashland Emergency Notification System

- Register phone numbers, email addresses, and other contact information
 - Receive alerts/directions in the event of disaster/emergency/major hazards

- Low-cost to users
 - Telephone support for users wanting to register
 - Online streaming of emergency radio signal
 - User data protected
 - May require additional funding
- **Value Services**—Available to Customers at Additional Cost
 - Consumer
 - IP-Based Home Telephony with QoS
 - Phones
 - Lines
 - Long Distance
 - Email-to-Voice
 - Voice-to-Text
 - PC Support
 - IP Television Appliance
 - QoS Add-On
 - Home Security System
 - Business
 - Multi-Line Telephony System with QoS
 - Phones
 - Lines
 - Long Distance
 - Email-to-Voice
 - Voice-to-Text
 - Website Development
 - Website Hosting
 - Online Store Development
 - Online Store Hosting
 - In-Store Wireless for Customers
 - Business Security System

Partner Fees—Costs of Services Provided to ISPs/Business Services Partners and the City

- Hourly charges for technical support when extra capacity exists
- Fees for SCADA system telecommunications

“QoS” = Quality of Service

Establish AFN Board

Create an Executive Advisory Board to provide City Council with guidance and direction pertaining to Ashland Fiber Network’s strategic and tactical direction. This board should primarily represent the interests of Council and the City AFN, but include partner representation for practical input.

Proposed roles of board include the following:

- Approving business plan updates and modifications for presentation to City Council
- Approving major projects and capital carryovers
- Approving rate structure changes for presentation to City Council

- Recommending contract approvals for presentation to City Council
- Approving business reports and updates for presentation to City Council

Proposed composition of the board:

- 2—Mayor and/or City Council members for elected officials
- 1—City Administrator or their designee for the municipal government
- 1—Information Technology Director or their designee representing management of AFN
- 3—Industry professionals from successful public telecommunications enterprises
- 1—Citizen-at-large representing the views and interests of the Ashland community
- 1—Current AFN partner to represent partners’ interests in the telecommunications utility enterprise

On-Network IP Television

Ashland Fiber Network will explore options for an on-network Internet television product with its Business Partners. If feasible, this is a key option for using on-network multicasts to reduce costly bandwidth consumption for media over the Internet.

Public Perception

Moving public sentiment and media coverage as AFN’s results improve will be critical to the utility’s marketing approach. Restructuring the presentation of AFN-related debt to create a more complete picture is a requisite step in that effort. Specifically, IT will need to work to present more information, AFN’s progress in owning an increased portion of debt, and related issues. For example, information on how the City’s 2004 bond is paid and overall progress made in repayment provide a more circumspect view to counter negative impressions.

Changing public perception of AFN’s history will aim at shifting focus on to products and services for sale. That focus will pair with business partner marketing efforts to support AFN’s new revenue-centric strategy.

Debt Payment Plan

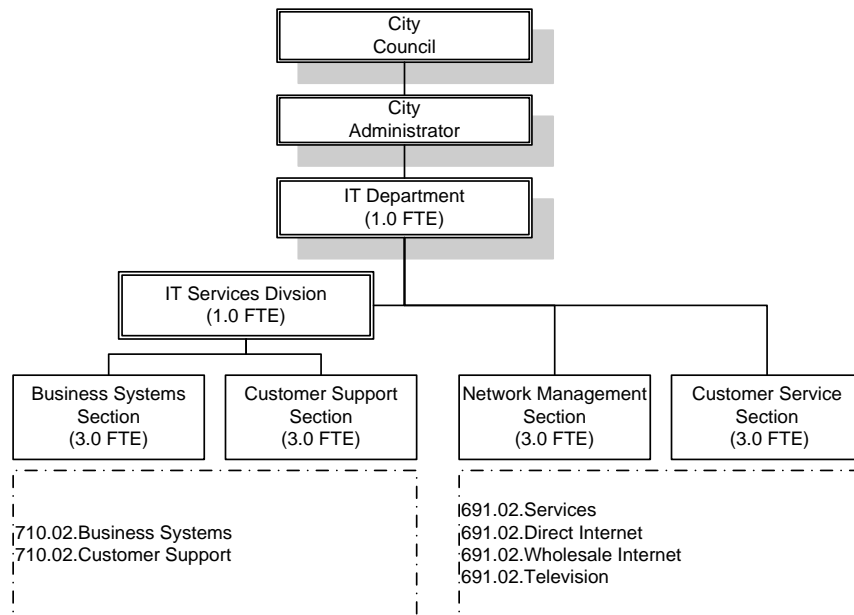
To manage operating expenses in balance with capital investment requirements, this strategic plan relies on holding AFN’s share of debt service payments at the rates expressed in the table, below. To achieve the 45% of debt goal in 2014 and beyond, AFN must hit high revenue targets, reduce its cost of bandwidth, and invest in infrastructure at the prescribed rate. It is exceedingly unlikely that AFN will exceed a 50% share in the foreseeable future.

Year	AFN Share of Debt
2005	\$0
2006	\$0
2007	\$0
2008	\$356,000
2009	\$356,000
2010	\$356,000
2011	\$700,000
2012	\$460,000
2013	\$460,000
2014 Forward (Goal)	\$600,000

Reorganization of Operations

AFN management will better segregate AFN finances, functions, and operations from those of general City IT services. This permits accurate accounting of the investments resources applied to AFN apart from unrelated City resource investments. To accomplish this, the Information Technology Department will reorganize into the divisions displayed with the chart, below.

An IT Manager will oversee City IT services while IT Director will manage Ashland Fiber Network through its work plan. The reorganization reduces staffing by 1.0 FTE in Fiscal Year 2011, then by another 1.0 FTE in Fiscal Year 2012. This nets savings of approximately \$60,000 in 2011 and \$165,000 in the two successive fiscal years, after accounting for projected salary and benefit cost increases.



AFN management will also work with the City of Ashland's Administrative Services Department to restructure the finances of the telecommunications utility. The effort refines management of resources between the City and AFN to prevent diminishing City services when AFN is faced with financial pressures, or the reverse. This has occurred in the past and while easier in day-to-day management, resources must be reimbursed across divisions to keep the finances of the operations whole. The restructuring will also permit the City's IT Department to track and report on the value of new services by product categories quarter-to-quarter.

Based on trouble ticket loads and goals, there is the option of eliminating one AFN position. A services contract better fits some of AFN's variable work, for which services are better paid for on an as-needed basis. This will be possible once Public Utilities Commission corrections are complete and WiMax installations are finished—timing that yields personnel savings without impairing revenues from adding services. Additionally, if the introduction of new services justifies a new or temporary position with offsetting revenues, AFN must retain the option of acting on that need.

Implementation of AFN Capital Plan

Performance Metrics

Standards for performance are partly driven by demand and partially by competition. To be competitive, AFN will need to provide similar speeds and price points as local competitors. Relative to product quality achieved through the municipal telecommunications system and its providers, AFN must also build to meet the expenses of maintaining its network to a level that supports projected usage. To date, AFN's oversell rate—the ratio of maximum capacity to maximum usage demand—has been maintained at a level many times lower than the typical commercial provider.

2011 -2013

Measure	
Download Speed Up To:	35 Mbps
Upload Speed Up To:	10 Mbps
Uptime to Meet or Exceed:	99.9%
Maximum Average Response Time:	20 ms
Maximum Bandwidth Cost:	\$204,000
Up-To Speed Performance:	No less than 75%
Maximum Annual Customer Churn Rate:	20%

2014-2016

Measure	
Download Speed Up To:	50 Mbps
Upload Speed Up To:	15 Mbps
Uptime to Meet or Exceed:	99.9%
Maximum Average Response Time:	20 ms
Maximum Bandwidth Cost:	\$276,000
Up-To Speed Performance:	No less than 75%
Maximum Annual Customer Churn Rate:	20%

2017-2020

Measure	
Download Speed Up To:	100 Mbps
Upload Speed Up To:	25 Mbps
Uptime to Meet or Exceed:	99.9%
Maximum Average Response Time:	20 ms
Maximum Bandwidth Cost:	\$408,000
Up-To Speed Performance:	No less than 75%
Maximum Annual Customer Churn Rate:	20%

100 Mbps is the Federal Broadband Initiative goal for all communities in the United State, to be met by 2020.

Capital Investments

Ashland Fiber Network's capital investments have been nominal over the past three years. The City's Capital Improvement Plans show intent to refresh certain hardware, make continuous investments to broaden coverage, and add infrastructure to support new services. Those planned investments were not made for various reasons.

Capital investments are now aligned with AFN’s new System Plan without the need to stop and restructure AFN’s portfolio of upgrade projects. It is important to note that the absence of investments has not permanently impaired the telecommunication utility’s services against the performance metrics defined in the horizons of this plan. However, significant future investments loom.

To support bandwidth demand expected by 2015, AFN will look to invest up to \$1.8 million from revenues into its fiber-to-the-premise (FttP) services as customer orders and trends dictate. This strategy will be updated annually to course-correct as consumer and business bandwidth consumption take shape against new Internet-centric technologies. It will also be constrained by the ability of AFN to pay for the upgrades.

Capital investment from AFN System Plan	
FY 2011	\$218,500.00
FY 2012	\$147,500.00
FY 2013	\$128,100.00
FY 2014	\$210,000.00
FY 2015-2020	\$1,400,000.00

Strategic capital investments are critical to maintaining AFN’s value into the future. A poor infrastructure provides slow and/or unreliable service and will fail to maintain customers. That, in turn, would erode revenues and create systemic weaknesses in AFN’s infrastructure over time.

Maintaining infrastructure therefore accomplishes two purposes. First, it maintains the value of the system. Second, it answers the concerns of business partners whether they are offering services through a strong and reliable channel. AFN’s ISP partners have, in fact, expressed their desire for assurances that selling AFN services would be good for their customers over the long term; transitioning customers to new products because AFN does not keep pace equates to undesired higher customer attrition. A related ISP partner concern has been whether City priorities for funds on the municipal government side will take away from AFN’s maintenance. The fear of lost customers because AFN fails to keep a healthy infrastructure is fair and should be prevented.

Controlling Costs

Controlling bandwidth consumption is a key piece of controlling AFN’s operating expenses. Monthly usage caps are an increasingly common practice with telecommunications companies for that reason. As of May 2010, AT&T, Comcast, and Verizon have all announced or implemented a usage cap structure for their products in the past year. Beginning in 3Q2010, AFN will look to institute a new product and rates structure with caps. Proposed caps will affect less than 1% of AFN’s customers and are more generous than caps published by the other telecommunications companies. Customers will also be allowed to transition when they choose, unless they hit a general usage ceiling. In that event, customer service representatives would contact customers to help them choose the package that best fits their needs.

On a practical level, a customer who hits a monthly usage cap will see their speed throttled down until the next measurement period, or until they paid an additional fee for overage use. Usage will be viewable via a meter on a customer web page linked to the AFN website.

Maximum usage caps aid AFN in controlling the bandwidth consumption of a few customers who negatively impact the speed experienced by other customers on the same node of the network. AFN would be a first-follower in implementing this kind of change, behind the companies mentioned previously, and would use a “soft cap” that charges only a small overage with the goal of helping the customer perceive and regulate their own usage.

AFN management will not pursue a 50 mbps product to match the fastest option offered to Ashland residents in Fiscal Year 2011. This “Halo Model” marketing is used to generate media attention and consumer interest. Sales are normally limited by the vendor to a tiny percentage of customers. Consistent with AFN’s no-gimmick approach, the product is unsupportable at reasonable rates and will not be matched.

Contribute to Economic Development

The Ashland Fiber Network has fostered a solid working relationship with the Ashland Chamber of Commerce and business owners in the community. AFN management has represented the City on the Chamber’s Economic Growth Tactical Team to quickly respond to inquiries from business owners interested in relocating to Ashland. AFN will maintain a similarly active role. This will focus efforts on working to successfully attract prospective business owners to relocate to Ashland, who AFN will support as future customers.

AFN will also pursue partnerships with economic and business development organizations to help achieve the goal of maintaining prevailing wage and primary jobs in Ashland. A tactical response team consisting of the Ashland Chamber of Commerce, AFN, and the Southern Oregon Regional Economic Development, Inc. (SOREDI), private non-profit organization, can assemble to quickly react to any business owner considering relocating in or out of Ashland. This response team would provide business assistance, expansion, and relocation services to Ashland.

Grow AFN’s economic development role for the Ashland community by working with local governments, the Ashland Chamber of Commerce, and economic development organizations to play a role in attracting and retaining businesses in Ashland. Maintain AFN’s capital system plan to support the telecommunications needs as identified in the City’s economic development plan.

Implement Wireless Service and Begin Connected Community

AFN’s Wireless Services is its one business line that has strong growth potential in terms of net revenues. Customer requests indicate a rising demand for high-speed wireless services in business areas, where AFN’s wired infrastructure cannot reach, and in areas where there is no coverage by alternative providers. Wireless services can come in two modes: WiFi and WiMax. WiFi has limited range and speeds, whereas the faster and farther reaching WiMax standard requires special antenna devices to access communications spectrum.

AFN implemented its pilot WiMax project in early-2010 to gauge the service and serve as a proof of concept for subsequent infrastructure investments. Two customers are using the service as of May 2010, with feedback being positive. Ashland Fiber Network is on track to offer its AFN Max service in the fourth quarter of 2010. As stated previously, the return on investment period for AFN Max is under three years using conservative estimates.

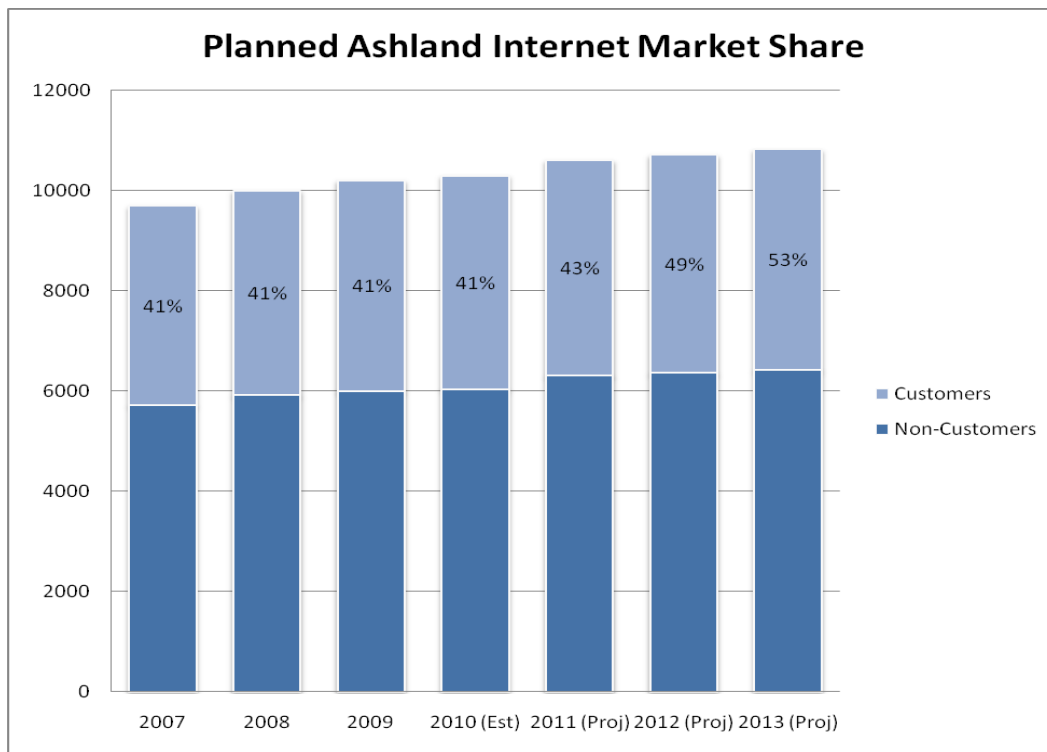
Propagation models indicate AFN’s WiMax project will increase coverage to reach up to 98% of the area in Ashland’s boundaries.

Marketing and Market Share

New Marketing Strategy

As part of a new marketing approach, Ashland Fiber Network will need to set a Marketing Strategy connected to its partner contracts. The approach must address the problems of AFN-partner branding, emphasizing AFN’s local service—local impact—local quality product differentiation, and develop a means for AFN to serve as a co-brand that depicts community connectedness.

Operationally, improvements identified that will facilitate customer acquisition, customer retention/low customer churn, and market share include the following.



Low Barriers for Customers

The customer acquisition and support coordination between AFN and its ISP partners has not made customer signup as easy as possible in the telecommunications utility’s first decade of operations. Customers have had negative reactions to the confusing and inconvenient requirement that they call ISP partners to sign on with “AFN”—only after which the customer could call AFN to schedule their service installation. Presumably, just as many called other providers in the area and were lost as customers.

AFN management and staff are working on process improvements. Customers who call AFN are now supplied with a listing of ISP partners and their brief tag lines. They can make their selection at the time of first call and also schedule their installation appointment.

Additional improvements should include enhancements to the AFN website with a focus on the utility's new marketing strategy and easy sign-up for AFN services. Similarly, AFN staff will work with the City's Customer Service Division to offer Internet service with utilities connection.

Accounts Receivable Policy

Ashland Fiber Network's accounts receivable policy will continue to recognize revenues on an accrual basis. In support of this policy and beginning in July 2010, AFN will require payment from customers and ISP partners for services within 30 days of due, or service will be terminated. This will prevent high bad-debt costs in the future. AFN will also assess the financial viability of all partners before having them as customer options beginning with the 2011 fiscal year, including a potential deposit and credit-line requirements.

Bundled Services Menu

Bundled services are a marketing and retention tool and do not directly enhance revenues. Rather, service bundles reduce customer churn and tend to reduce customer acquisition costs due to an average loss rate.

The following services would be offered through Business Services Partners either individually, or working together to assemble competitive packages. Savings are expected to be approximately \$5 for each service in addition to the first. The advantage to service bundles is that they should require minimal to no infrastructure investments to offer.

Consumer

- IP-Based Home Telephony without Quality of Service (QoS)
- Cable Television
- IP Television Appliance
- Internet Access
- Online Storage and Backup
- Smartphone Support
- PC Support
- Home Energy Management
- Home Security System
- QoS Add-On, \$10 / month

Business

- Multi-Line Telephony System with Quality of Service (QoS)
- Office PC Support
- Smartphone Support
- Server Hosting
- Website Hosting
- Online Store Hosting
- In-Store Wireless for Customers
- Online Storage and Backup

- Office Energy Management
- Business Security System

Semi-Annual City Council Update Reports

Produce and present a semi-annual report for the City Council and City Administrator with the following information:

- Customer Churn Rate and Performance to Goals
- Estimated Market Share, Access, and Performance to Goals
- Revenue Trend and Performance to Goal
- Operations Cost Trend and Performance to Goal
 - Speed
 - Reliability/Availability
 - Capacity
- Status of Capital Plan and Project Performance
- Debt Payment Performance to Goal
- Summary of New Products and Performance
 - Emergency Notification System Utilization
- Summary of Marketing Activity
 - Low-cost Service Utilization Summary
 - Account Upgrades Summary
 - Customer Service Ratings Performance to Goal
- Summary of Economic Development Activity
- Provide customer service excellence

Operating Plan—Through Year Three

Reevaluate Divesting AFN

It will continue to be important to reevaluate the City of Ashland's options for divesting Ashland Fiber Network periodically. Options include selling the infrastructure, contracting out operations of the system for a set amount of revenue to the City, and segregating AFN off as a City-owned but wholly separate and independent enterprise. Where the telecommunications utility's performance improves, the value of the enterprise to external parties increases and the point may come where the City can pay off enough AFN-related debt to make a deal worthwhile.

Deciding whether to keep AFN as a municipal government operation or divest it in some form has other consequences. Any deal would need to maintain the municipal government business network, on which the City's communications and data depend. Other factors to consider related to City Council's ability to steer AFN's strategic priorities to influence economic development in the community, availability of advanced telecommunications services for citizens, and support for other educational and governmental programs that are priorities to the City's leadership at any given time.

At minimum, the successful reorganization of AFN's operations to produce positive net revenues after debt payments provides the City with more and better options in the future. It is a primary aim of this plan to provide those options to the Mayor, City Council, and City Administration.

Continue Implementation of Capital System Plan

Phase in first components of fiber-to-the-home (Ftth) to be ready to offer the service in the future.

Reconstitute Capital Reserves

As revenues permit, build reserves to pay for larger capital investments in fiber-to-the-home (FtH) build out in 2014 and 2015.

Continue Expansion of Value-Added Services

Improve business analytics capabilities to continue to pursue services citizens, businesses, and visitors demand.

Skills Gaps and Training

Investments into training are becoming critical after three years of nominal to no investments in staff skills. AFN's training program will address skill gaps in the telecommunications utility's operations while not significantly increasing expenses. The investments will also serve staff retention and motivation purposes, including preparing technical employees to have needed skills well in advance of AFN's next technology migration.

Annual Strategic and Business Planning Update

Generate updates to this AFN Strategic Business Plan as major internal, local, regional, and national trends emerge.

Ten-Year Horizon

Staff Successions

Though AFN is no longer single threaded regarding specific staffing skills and/or duties, a formalized staff succession plan is being implemented so that duties can be transitioned in the event of staff absence or turnover. AFN will use a skills matrix approach that identifies AFN services and the discreet skills required to maintain those services. The process will then have employees formally document their duties, skills and skill levels, followed by reviews with supervisors to ensure skill levels are rated correctly and consistently. Managers will then identify depth requirements based on service needs and service criticality, identify holes, and work with staff to create development goals to fill in those gaps.

Capital System Transition

The AFN System Plan identifies the need to execute projects to migrate AFN to a Passive Optical Network design in 2014. This migration will keep AFN level with alternate service providers in meeting anticipated customer demand for online products and services. However, AFN's network design staff also believes the national telecommunications industry, which is highly reliant on hybrid fiber-coaxial (HFC) networks, will produce or motivate alternative HFC plant upgrade solutions before AFN must make its most significant migration investments. The industry has billions invested in HFC designs and will not easily abandon them.

Increase Debt Contribution

A primary focus of AFN management will be on increasing revenues. The most conservative figures are used in long-range planning for heightened accuracy. However, if AFN meets the most optimistic figures for cost savings and revenue increases, the telecommunications enterprise may be able to contribute to debt service at a rate approaching 50% of annual payments. AFN will work to be able to pay for one half of the annual payment amount on its bond beginning in Fiscal Year 2014.

Appendix A—Stakeholder Input

Stakeholders are parties and individuals who have a major interest in, or may be substantially impacted by, Ashland Fiber Network's operations. For the purposes of this strategic planning process, six stakeholder groups were identified.

- Mayor and City Council—Serving as AFN's de facto executive board of directors, this group sets the telecommunications utility's strategic priorities for the future. The Mayor and City Council must also ensure that AFN's performance serves the best interests of the City of Ashland organization, as they determine it.
- City Administration—The City Administrator must balance all of the City's operating needs with the policy direction of the Mayor and City Council. The City Administrator has legal responsibility for setting the City's budget, capital improvements program, and ensuring compliance with all applicable statutes and regulations.
- Citizens of Ashland—Ashland's citizens are the owners of Ashland Fiber Network, as the municipal telecommunications utility. The citizens of Ashland also pay into the municipal government's tax base and have a consequent interest in bonded debt being paid.
- Business Partners/ISPs—There are currently four Internet Service Provider partners working with AFN, down from a high of eight. These private businesses sell AFN services directly to consumers and businesses for a markup on wholesale rates. They have a direct financial impact from whatever direction AFN takes, but no absolute or dedicated stake in AFN's viability as they may also resell similar services from other vendors.
- Information Technology Department/AFN Staff—City staff in the Telecommunications Division/AFN maintain the AFN infrastructure, work with ISP partners to coordinate and troubleshoot, and are directly impacted by any reorganization of AFN.

The Information Technology Department met with all identified stakeholders between March and June of 2010. Summary input received by stakeholder category was as follows:

- Mayor and City Council—The Mayor and City Council members had varying degrees of focus on Ashland Fiber Network. Overarching goals received centered on the following feedback: (1) The need to make AFN financially viable long term; (2) AFN should continue to provide quality service; (3) AFN must cover 100% of the community in some way; (4) AFN should endeavor to find a way to pay for a third to a half of the 2004 bond debt; and (5) AFN should play a role in economic development.
- City Administration—Given AFN's history and the City's financial status, one priority is the City Administrator's need for AFN to pay as much of the annual debt payment on the 2004 AFN bond, as well as a share of the City's administrative costs commensurate with AFN's utilization of those services. Additional priorities noted included the need for a clear strategic direction and for AFN to cover its own capital and operating costs into the future.
- Local Businesses—AFN has and can continue to play a role in the City's economic development. Surveys in 2008 indicate AFN has had a role in attracting businesses to locate in Ashland and discussions with the Chamber of Commerce reinforced the role AFN can play in bringing employers to the community, responding to the needs of businesses to keep them in the community, and helping businesses compete better on a national to global scale with easy-access telecommunications services. The Chamber is also supportive of the concept of low-cost community access to the Internet as a value point for companies and residents looking to move to Ashland.

- Citizens of Ashland—AFN could be a good resource for the community, but it has a poor reputation in the minds of many given the project problems and debt issues reinforced in local media. Taxpayers and ratepayers are contributing to the debt. A low-cost basic level of access is something some community members would like the City’s telecommunications utility to pursue.
- Business Partners/ISPs—Strongly-express the thought that the AFN should not take on the role of a direct ISP, in competition with their businesses. Most are willing to pursue revenue and growth opportunities with AFN, though some are undecided. The ISPs asked about making an offer to purchase AFN if the City carries the entire debt. The majority do not want the City and AFN to provide low-cost community network access as it would harm parts of their businesses. However, some understand how the City could use such a service to develop a value channel that attracts new customers who are more loyal.
- Information Technology Department/AFN Staff—Observations are that the original AFN project’s financials needed better planning and that many opportunities have been missed in the past 10 years wherein AFN could have performed better financially. Staff is proud of the work they have done and the service levels they achieve. Most want to see AFN (1) become financially viable; (2) no longer serve as a debt-ridden failure in the eyes of media and City leadership no matter how well AFN may perform; and (3) continuation of the strong team that currently exists.

Appendix B—Detailed SWOT Analysis

Strengths

Capable Business Partners

The Ashland community is fortunate to have a mix of small businesses in the local area that are formidable providers of software development, telecommunications, technical support, and other technology-related services. Project A's work with communities on government websites and online transactional services have helped produce numerous Digital Cities of America and Best of the Web award recipients. Ashland Home Net has a compelling history as the community's Ashland-only cable television and Internet service provider. Computer Country has loyal computer support customers and has partnered with Data Center West to offer an area collocation facility and managed IT services. Hunter Communications has built an impressive network infrastructure and is a leading provider of high-speed data, telephony, and cabling services in the region. InfoStructure offers an array of service options, including telephone and Internet services, web hosting and email, and a quickly growing portfolio of business customers for which they provide full telecommunications services. JeffNet operates a regional radio station system that spans a large portion of Oregon and northern California and is a leading voice in many of their covered communities.

The potential role facilitating telecommunications and technology services through local companies then centers on two core strengths—(1) the real ability of AFN's partners to quickly offer new, competitive, and quality technology services to meet the emerging demands of Ashland and (2) AFN's capacity to connect citizens, businesses, and visitors with the maximum local benefit. Area businesses grow and add living wage jobs when AFN fulfills this role. An important secondary effect comes with AFN's partners financially supporting municipal services through shared revenue agreements.

Ashland Fiber Network, as it was originally conceived, had the intent of creating these public/private partnerships so as to provide services to the Ashland community. However, other than its wholesaler relationship with its ISP partners, AFN has not successfully developed new services under those partnerships. Much of this may be attributed to initial project issues, consequent financial struggles over the ensuing years, and resistance from businesses that were uncertain of AFN's direction. The situation remains that AFN can and is ready to make strides in this area to support itself financially.

Built-Out and Stable Incumbent

A primary advantage in AFN's favor is its existing infrastructure. The build-out is expansive and carries the capacity for the telecommunications utility to provide new services. This advantage puts AFN on nearly equal footing with alternative options on a functional level. Internet-based services must run on a physical infrastructure, giving three options: AFN, Charter, and Qwest.

AFN's network design was created and implemented with a focus on both performance and longevity. It is situated to allow upgrades as technologies change in the future with incremental expense instead of requiring major periodic rebuild. AFN's design remains flexible enough to accommodate the progression through its System Plan while remaining compatible with the emerging fiber optic technologies. More novel designs at the time would have proven much more expensive to operate.

Customer Service

The customer service ratings of local telecommunications companies are low on Overall Satisfaction measures from J.D. Power and Associates. Ashland Fiber Network has a compelling advantage on this factor with service representatives who know the local area’s neighborhoods and who have performed at a level that has earned the City many positive calls and compliments. Unlike regional and national companies, AFN offers its customers local service representatives who are well-qualified technically and are invested in customer care. This is a core competency that helps drive AFN’s value in the eyes of potential customers, who also are AFN’s owners.

2009 Internet Service Provider Residential Customer Satisfaction Study

West

Award Recipient

EarthLink



• [Read the Press Release](#)

Company	Ratings Factors					
	Overall Satisfaction	Performance and Reliability	Cost of Service	Customer Service	Billing	Offerings and Promotions
Sort: ▲	▼	▼	▼	▼	▼	▼
AT&T Yahoo!	●●●●○	●●●●○	●●●●●	●●●●○	●●●●○	●●●●○
Cable One	●●●●●	●●●●●	●●●●○	●●●●●	●●●●○	●●●●○
Charter	●●●●○	●●●●○	●●●●○	●●●●○	●●●●○	●●●●○
Comcast	●●●●○	●●●●○	●●●●○	●●●●○	●●●●○	●●●●○
Cox	●●●●●	●●●●○	●●●●○	●●●●○	●●●●○	●●●●○
EarthLink Award Recipient	●●●●●	●●●●○	●●●●●	●●●●○	●●●●●	●●●●●
Embarq	●●●●○	●●●●○	●●●●●	●●●●○	●●●●○	●●●●○
Frontier	●●●●○	●●●●○	●●●●○	●●●●○	●●●●○	●●●●○
Mediacom	●●●●○	●●●●○	●●●●○	●●●●○	●●●●○	●●●●○
Qwest	●●●●○	●●●●○	●●●●○	●●●●○	●●●●○	●●●●○
Time Warner Cable (RR)	●●●●○	●●●●○	●●●●○	●●●●○	●●●●○	●●●●○
Verizon	●●●●●	●●●●●	●●●●○	●●●●○	●●●●○	●●●●●

Scoring Legend

●●●●● Among the best ●●●●○ Better than most ●●●●○ About average ●●●●○ The rest

Please note that J.D. Power Consumer Center Ratings may not include all information used to determine J.D. Power and Associates awards.

Local Economic Impact

One advantage identified at the onset of founding a municipal fiber optic network was the benefit the service would have to the Ashland economy. The original vision pointed at adding job opportunities for residents through telecommuting, as well by making it possible for Ashland businesses to grow by effectively reaching national and even global markets. Determining value on this impact is difficult, but access to affordable and advanced telecommunications services presumably makes a community more attractive to companies than cities that lack those options.

In addition, the economic impact AFN has had on the Ashland community has likely been significant. Through its own services and by accelerating telecommunications infrastructure investments by other companies, Ashland has benefited from related construction income at the same time it gains access to advanced services atypical of cities outside major metropolitan areas. Indeed, the President's National Broadband Plan and Omnibus Broadband Initiative identify the poor extension of advanced telecommunications as a continuing problem and national priority. As the National Broadband Plan states it, "broadband in America is not all it needs to be. Approximately 100 million Americans do not have broadband at home. Broadband-enabled health information technology (IT) can improve care and lower costs by hundreds of billions of dollars in the coming decades, yet the United States is behind many advanced countries in the adoption of such technology". On this level, Ashland is a community that has positioned itself well by having Ashland fiber Network.

Over the past ten years, revenues generated from AFN cable television and Internet services have remained in the local area, supporting its jobs and government services. As described in the earlier section covering AFN's products and services, price competition for cable television also saved Ashland residents more than \$5 million through lower cable television rates than in neighboring communities. The ISP partners have financially benefited, as well. To date, AFN Retailers have generated at least \$10 million dollars reselling AFN services to community residents. Much of those funds remained in the community and supported area jobs.

The financial pressures AFN has faced since its early days may have detracted focus from AFN's real and potential economic benefit. And yet, the economic activity generated has been significant by any measure. AFN can and must play an even stronger role in economic development by working more closely with partners to provide incentivized telecommunications packages for businesses moving to the Ashland area, or looking to locate out of it for reasons AFN can help mitigate.

Low Customer Churn

Churn is a fundamental measurement of any subscription service and is a key metric in the telecommunications industry for ascertaining the performance quality of a company's cable television, Internet, telephone, or wireless services. Generally stated, acquisition and reacquisition of customers is expensive. Superior products and high customer satisfaction improve customer retention and indirectly reduce costs.

As detailed in the Customer Trends section, Ashland Fiber Network's churn is very low compared to companies offering similar services nationally. Surprisingly, Southern Oregon University's (SOU) academic calendar also has no correlated impact on AFN's churn rate, which may contribute to the low churn number. Of the approximate 5400 full-time students, approximately one-third live on campus, one-third commute from neighboring cities, and one-third reside in off-campus housing. Students living on campus have service provided through the University and non-residents are not potential customers. Of SOU student's, AFN's university customers are only those who live off-campus. Many of those customers live with other students in shared rental housing, with a high likelihood at least one resident will remain during the summer.

Community Support for Local Services

As important as any other strength is the value Ashland's citizens place on supporting local business. With its high education and close community traditions, AFN can forge relationships with customers in

a way most private companies cannot. Ashland also has sophisticated consumers who do not purchase goods and services solely on the basis of lowest price, which is the marketing emphasis most telecommunications companies have. As evidenced by how the community has made endeavors like Ashland Food Coop and open markets viable over the long term, Ashland's citizens will look at the overall value and impacts of their purchases. AFN has the potential to serve as a unique hub for a truly connected community, provided it obtains the support of community leaders, continues its tradition of customer service excellence, does well communicating the local benefits of AFN services, and turns around its reputation in the eyes of local media.

Weaknesses

Limited Customer Base

The City of Ashland is a geographically bound area with a finite, almost static population. Coupled with the historical desire not to expand services to neighboring cities for financial and political realities, these factors restricts Ashland Fiber Network from pursuing most growth strategies focusing on sales volume and market growth. That fact is critical in that those growth strategies are typical of businesses with large debt burdens. In many ways, AFN is a business that invested heavily to expand its operations rapidly and at higher cost, without realizing the end point would not financially support the cost of operations and the debt incurred to complete that expansion.

Only dated demographic information is available for Ashland until 2010 Census figures are released. Data available show the city has an estimated population of about 22,000 citizens in roughly 10,000 households. In a non-monopoly market with providers offering commodity services, market share typically cannot exceed 65%

Indirect Branding/Brand Confusion

Customer confusion exists for AFN and its ISP partners regarding who to contact for technical support and how the two are connected. Customers regularly call AFN directly when having problems connecting to the Internet, and not knowing their ISP. Customers are comfortable calling AFN, identifying it as a trusted City service. This type of confusion shifts significant support costs from ISP partners to AFN as staff still work to assist the customer. It also emphasizes the need to AFN and its ISP partners to develop a marketing strategy that clarifies the partner relationship, support resources, and benefits of choosing a local company for Internet service.

The unclear roles of AFN and its ISP partners also detract from the value of AFN's advertising. Money spent has been successful at portraying the local value theme, but has not tied consistently to added business. Only some ISPs represent their partnership with AFN in their independent advertising, allowing no indication to customers how their service connects them to both.

Mixed AFN-City IT Operations

Ashland Fiber Network is organizationally under the City's Information Technology Department. The operations of the internal Computer Services Division and AFN have been blended since 2008 to generate redundancy and flexibility across division lines. However, an accounting structure was not implemented with the merging. The result is an inability to manage resources in a way that accurately captures investments in central IT services versus AFN operations. Untracked resource shifts amount to subsidies to across division and, while they may balance in aggregate, must be known and managed.

Value of ISPs

When Internet service first became available, Internet service providers (ISP) were companies that provided customers with an Internet portal page, web browser, and email account to facilitate utilization—e.g., America Online and CompuServe. Over time, consumers and services evolved, access to web-based email accounts became low-cost, and reliance on ISPs waned with the ability to connect directly to the Internet through telecommunications companies. AFN’s ISP partners also provide technical support to their customers, such as setup assistance, virus scanning, and computer repair. Some ISP partners contracted those customer support services from companies based outside of southern Oregon. As such, those ISP partners primarily only hold an interest in marketing, customer billing, and a small profit residual.

Serving as an Internet wholesaler has worked adequately for the City of Ashland while contributing to the financial success of its ISP partners. However, long term trends indicate AFN’s cost pressures will render the current wholesaler model unsustainable beyond 2013 and is a weakness in AFN’s business. The decline may also occur more rapidly, depending on the introduction and the viability of new substitutes such as 4G wireless.

Volume Incentives and Advertising

AFN’s model for relying on external businesses to sell its services currently provides little incentive to promote AFN above other services. Revenue margins for AFN products are essentially standard across products. This fails to shape sales towards more profitable services while also leaving little incentive for ISP partners to advertise more profitable products.

Revenue margins for some substitute products are higher than AFN’s, such as DSL and dial-up services. Margin differences are another reason why price increases are not practical—when AFN increases wholesale rates, long-term revenue potential for selling the product falls if competition does not allow for price increases. Historical examples of this effectively discouraged sales growth when AFN would have benefitted from capturing more of Ashland’s market.

Customers seeking the AFN brand by name will only get the telecommunications utility part of the way to its financial goals. Lack of an incentives structure for AFN sales is a weakness that must be addressed to drive revenue growth and increased advertising by ISP partners. This assumes AFN retains its wholesale business model.

Partner-Competitor Challenges

AFN will not have the ability to tighten margins on ISP partners without leading them to sell alternatives. ISP partners will naturally look for higher profit the majority of the time. At that point, an AFN ISP partner assumes a role that is both partner and competitor.

ISP partners have had success in ensuring AFN does not compete by selling Internet services directly to residents. They were also not required to contribute financially to the construction of AFN in return for the partnership benefits they received. This relationship puts Ashland Fiber Network in the spot of relying on vendors who do not have an investment stake in the success or failure of the telecommunications utility. The unnatural monopoly, in which the City of Ashland and Ashland Fiber Network grant exclusive rights to sell AFN services to a consortium of partners, breaks down when those partners can then elect not to sell that service to the economic detriment of the resource. This artificial barrier to entry is a weakness that can quickly turn critical. However, its

removal does not necessarily mean AFN should become an Internet service retailer—the simple fact that AFN *could* compete but elects not to gives AFN and its ISP partners more equal ground.

It is true that only one ISP partner looks to sell AFN as its sole option. The others offer competing products and two ISP partners have indicated AFN is not their primary option as they make better margins selling other services. ISP partners decide and set their own retail prices, but still must be competitive with other providers. So, their emphasis on margin is a natural one.

AFN has the ability to enter the retail market quickly. It currently provides approximately 100 customers that requested AFN services directly.

Customer Data and Ownership

Retail Partners do not share customer data with Ashland Fiber Network, including any information other than the modem identifier to allow onto the network at what speed. This prevents AFN from performing business analysis to better project usage by service type, demand for additional services, and geographic trends such as customer loss in an area where there is heavy advertising AFN and its ISP partners can counter.

Stale Product Mix and Lack of Bundles

The current AFN product mix offered to the community consists of an analog cable television product and Internet services via cable modem. Two of AFN's four ISP partners offer a VOIP Internet telephone product and limited service bundles to customers. These bundled services fall short of what national and regional telecommunications companies offer on the basis of services, content, channels, VOIP telephone quality, and price discounts. Competitors offering bundled services such as packaged TV/Internet/Phone services experience a lower churn rate.

Local resident are marketed to heavily by both satellite and cable television providers. Offers often include deeply discounted introductory and loss-leader rates to get customers to switch. AFN and its ISP partners have elected to refrain from similar marketing ploys or gimmicks to acquire new customers. AFN also does not employ oversell practices common in the telecommunications industry, wherein capacity is oversold and customers lose faith in the service's ability to perform as advertised.

The lack of bundled services has not noticeably affected AFN's market share to date, but is expected to be a factor if not corrected.

Combined Consumer-Business Rates

AFN's current rate structure does not distinguish between business and residential customers. This is an uncommon attribute that reduces revenues unnecessarily. Usage patterns for consumers and businesses differ. Business activity tends to occur during the business day and customers require more responsive customer support due to the impacts network problems have on their business operations and customers. Residential usage peaks in the late evenings and customers have more basic setup and configuration issues. This weakness in the rate structure should be addressed by the time Ashland City Council approves ordinances setting AFN's rates.

Public Perception

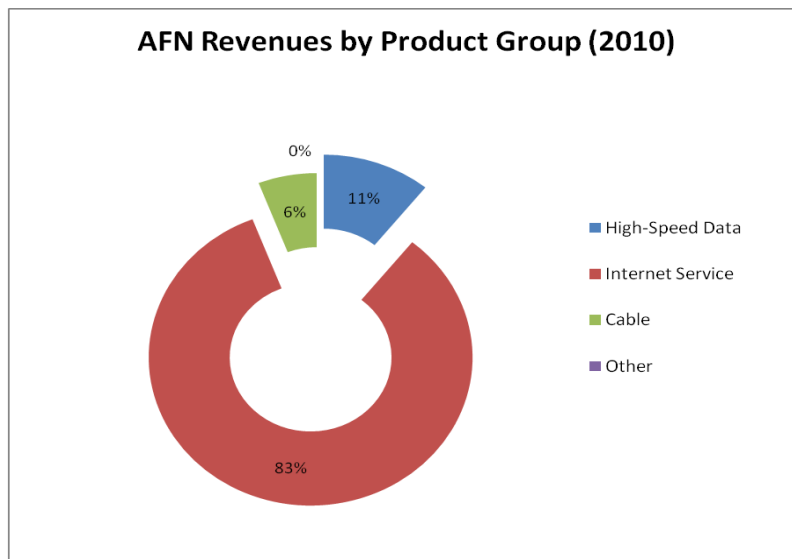
Ashland Fiber Network has been a long-time target for local media and some critics. This is not without cause. Shortcomings in the initial project plans produced cost overruns that appropriately

raised the concerns of residents. The need to work with local media to answer their questions and keep AFN operations transparent to the community is a crucial component to turning the reputation of the utility around. AFN can possibly achieve this.

Revenue Risk

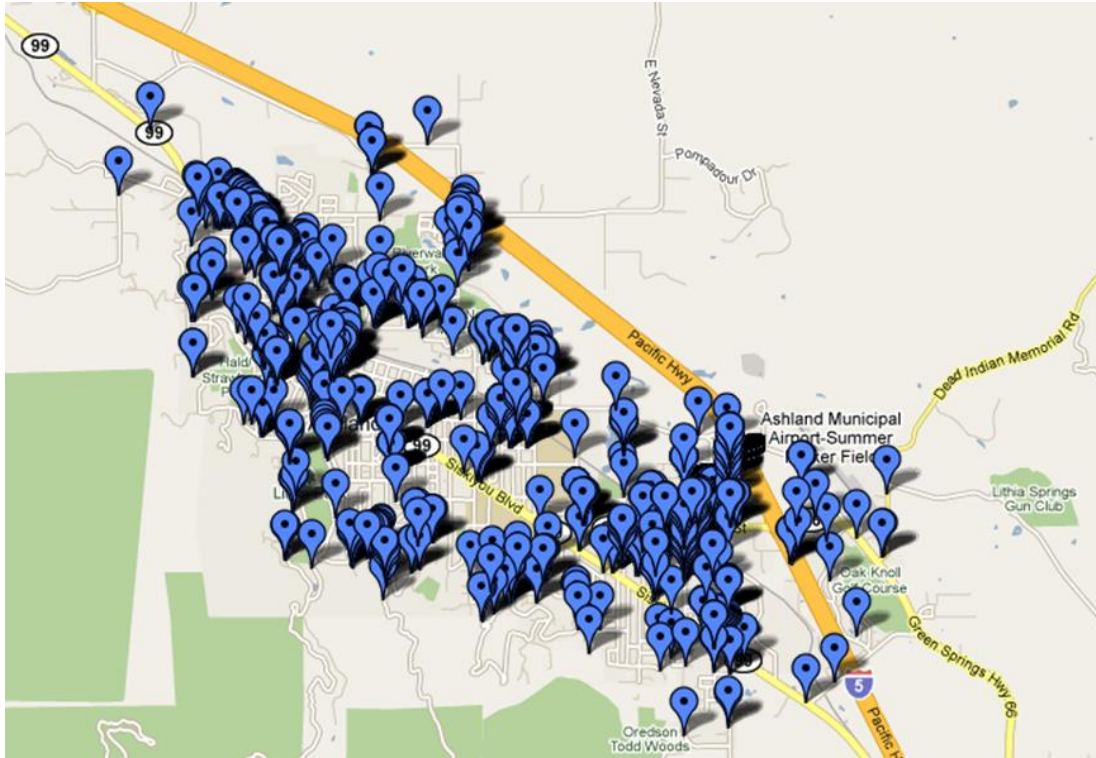
The practice of diversifying revenue sources is a means of controlling risk. Broadening operating segments and revenue sources is especially important in a telecommunications industry that is changing rapidly. New media alternatives and substitute products can otherwise have devastating impacts on the revenues and costs of a business. National telecommunications companies usually maintain business lines that include television/video, Internet, telephone services, online advertising, and television advertising for these reasons.

Ashland Fiber Network carries a minimally diverse set of operating segments. 87% of revenues come from the Internet Service business line. Importantly, AFN’s High-Speed and Cable revenues are declining. This creates extreme sensitivity to fluctuations in Internet Service rates and could result in major financial issues if prices fall.



Missing Coverage Areas

AFN is functionally built out. However approximately 1300 addresses scattered throughout Ashland are not connected to Ashland Fiber Network. Construction costs at the time were projected to be \$1.29 million to reach the final addresses, with a projected return on investment period of over 40 plus years. Following is a map of the areas where AFN is missing coverage. The map reflects how AFN is sometimes available to only some properties in the same neighborhood due to contractual or cost reasons.



It should be noted that approximately two hundred of the addresses missing AFN coverage are to locations where owners declined connections. Many have exclusive discounted bulk agreements with Charter Communications that also generate revenue for the property holders. These contracts essentially lock AFN out of accessing those properties. Complicating the matter, AFN receives installation requests from renters that it must refuse.

Based on AFN's finances and the unfeasible return on investment period to reach the approximately 1,100 addresses remaining, AFN will continue to be unable to provide those potential customers with wired services.

Opportunities

Evolving High-Speed Cable Technologies

Quality fast Internet service generates almost all of the revenues that support AFN's operations. The telecommunications utility must invest to maintain this resource, or else deteriorate into an unmarketable service.

There is no immediate limit to the bandwidth available via hybrid fiber-coaxial (HFC) technology approaching. Being technically aligned with the major multiple system operators—e.g., Comcast, Time Warner, and Charter Communications—means HFC networks will continue as an option with substantial research and development invested into upgrade options.

DOCSIS 3.0 is the next high-speed cable technology milestone for Ashland Fiber Network. Rolling out DOCSIS 3.0 will create the capacity for AFN to meet consumer orders for services with high speeds of up to 50 Mbps. The telecommunication utility's System Plan incorporates this transition with completion in 2012, detailing one-time capital investments and ongoing maintenance expenses.

It is unlikely that HFC networks will exceed speeds of 300 MB/sec, due to the tremendous amount of frequency required to make this available. This means that to provide services that can obtain 100 MB/sec to AFN customers, staff will need to transition it into a passive optical network (PON). A PON design will allow AFN to provide 1 GB/sec to the connected premises. AFN was originally designed with enough fiber to provide this type of service, though it will require a significant rebuild of the outside plant in Ashland neighborhoods.

Wireless Services

The Ashland Fiber Network offers three wireless products:

- AFN Anywhere—A limited-range 802.11B WiFi service retailed directly by AFN to consumers with daily (\$3.95), weekly (\$12.95), and monthly (\$30.00) rate options. This service was created to meet the connectivity needs of travelers visiting Ashland, but has important faults that have limited growth.
- AFN Rural Wireless—A limited-range 802.11B product that provides services to approximately 45 customers in targeted areas around Ashland, most of whom have no access to other services. The access point/antenna is exclusively powered with solar panels and wind generators.
- AFN Max—The latest WiMax wireless service offered by AFN. WiMax is a superior, robust wireless service offering increased upload and download speeds, as well as greater geographical reach. Because the spectrum is licensed and the City has a registered frequency, customers will require a special antenna to connect to AFN Max until computer manufacturers provide better options.

AFN's extension of WiMax services is the most economical means of delivering AFN Internet services to new potential customers. The service is AFN's best strategy to service the roughly 1,300 unserviceable addresses described in the Weaknesses section. In addition, to supporting high speed access by visitors in the future, some residents simply prefer wireless options for their mobile lifestyles.

Revenue Analysis

Capital Construction Costs: ~\$92,000

Annual Maintenance: ~\$1,400

Projected Annual Revenue: ~\$30,000 (Year 1), ~\$30,000 (Year 2), ~\$30,000 (Year 3)

Unadjusted Return Period: ~3.0 Years

Cable Services RFP

The City's cable television head-end lease contract is held by Ashland Home Net and expires in September 2010. The original terms include a \$1,500 monthly base fee with an additional 7% payment of monthly gross revenues. When AFN ended its direct cable television service and turned over the head-end to Ashland Home net, AFN had a customer base of approximately 3,200 subscribers. As of May 2010, that figure has dwindled to just over 1,800.

The RFP for cable television will need to address capacity beyond analog services. One likely explanation for Ashland home Net's declining customer base is the lack of digital, high-definition,

digital video recording, and perhaps IP-based television services to remain competitive with regional and national providers.

Revenue Analysis

Capital Construction Costs: None expected at the following revenues.

Annual Maintenance: ~\$200,000

Projected Annual Revenue: ~\$200,000 (Year 1), ~\$202,000 (Year 2), ~\$205,000 (Year 3)

Unadjusted Return Period: N/A

Internet Service Provision

Retail ISP Model

AFN's strategy to serve as a wholesaler instead of retailer has been reviewed many times since its 2000 inception. One segment of stakeholders point to the revenues AFN has missed by allowing ISP partners to collect a margin from the retail rate customers pay, despite the declining value of an email account. Other stakeholder point to the fact AFN would require additional staffing to perform technical support that the ISP partners are to provide. ISP partners can also size their staff more quickly and at lower cost than the municipal government.

The real value of AFN having business partners in the future rests in their ability to innovate new services. AFN can help provide to citizens access to those services for a share of sales. This agility and the ability to afford the marketing of new services is an advantage AFN could benefit from. AFN can reassess this position at a later time if needed.

To help answer the question whether AFN should switch to a retail Internet provider model, the following analysis assesses potential gains, likely cannibalization from the transition from wholesaler, and the gains that could realistically be expected. This analysis assumes AFN will have a lower market share due to increased and direct competition. It also projects a customer loss rate of 15% against an average revenue gain of \$6 per customer per month. AFN management believes the 35.1% market share retention is possible to achieve, although it is hard to predict how ISP partners will decide whether to abandon the market or compete, as well as how much to invest in competing for low-margin business.

On balance, shifting to a retail model would indeed yield higher revenues for AFN. However, it is not substantial enough to offset AFN's projected growth in costs and locks out potential partnerships for new service that may generate much stronger revenue. Instead, AFN can execute new partner contracts that maintain wholesale-retail relationships but add a full partner relationship option aimed at generating additional revenues. This direction provides AFN with the best path for growth without competing with long-time ISP partners. If successful, wholesale-retail vendors may also convert to full partners in the future.

AFN Without ISPs

Market Ownership	2010 (Est)	2011 (Proj)	2012 (Proj)	2013 (Proj)
Customers	4260	4600	5250	5700
Loss Rate	15%	15%	15%	15%
Net Customers	3621	3910	4463	4845
Share of Occupied Households	35.1%	36.8%	41.6%	44.8%
Avg Gross Revenue per Customer, Internet				
Wholesale	\$ 403.81	\$ 375.00	\$ 323.81	\$ 280.70
Retail (+\$6 per month)	\$ 475.81	\$ 447.00	\$ 395.81	\$ 352.70
Gross Revenue				
Wholesale	\$ 1,720,228	\$ 1,725,000	\$ 1,700,000	\$ 1,600,000
Retail	\$ 1,722,906	\$ 1,747,770	\$ 1,766,300	\$ 1,708,840
Difference	\$ 2,678	\$ 22,770	\$ 66,300	\$ 108,840

Community Internet Access

Direct Government-Citizen Communication

This business plan proposes AFN create a low-cost-of-charge slow-speed service open to all. AFN Community Connection users would begin at a start page called AFN Community Connection. The page would list the low-cost-access option, have content of interest to the community, and options for higher-speed Internet access options available through AFN and its partners. Once a connection option is chosen, a portal page would present with various community resources and contacts, such as common citizen questions, resources for new residents, public safety updates, news from schools, a community activities calendar, and communications from the City's elected and appointed leaders.

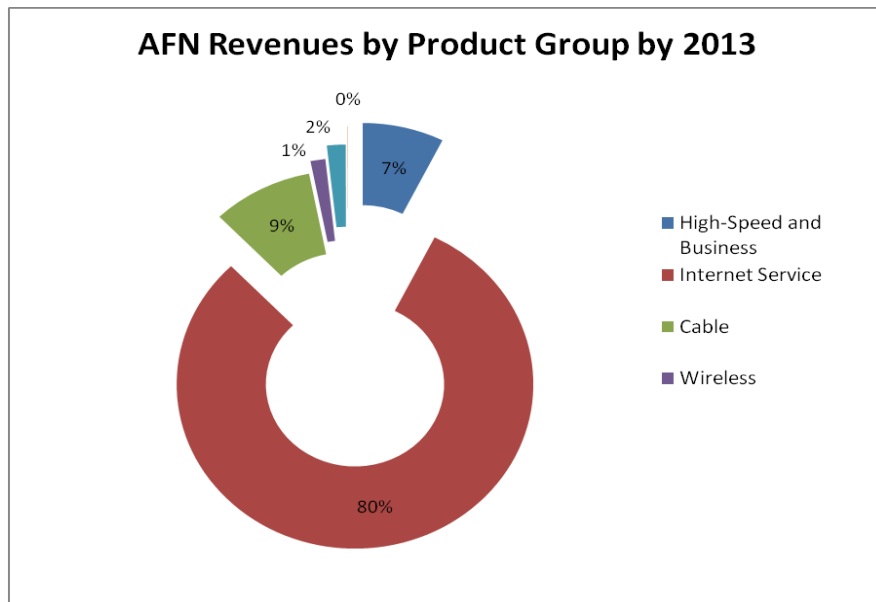
The potential for AFN Community Connect is large. At minimum, it would provide a low-cost service that connects residents to the Internet and each other on the basis of common community information. This would occur as a direct service in return for the property taxes that go partially towards AFN-related debt. AFN Community Connect adds value to AFN's customer channel at the same time. Potential customers will have many opportunities to see and choose to connect at higher speeds. Unfortunately, a slow-speed service only good for email and limited browsing is all AFN could afford due to bandwidth costs.

Additional Service Offerings

Offering new services is a key strategy in AFN's emerging as a financially sound telecommunications utility for the long-term. Offering new services through AFN Community Connect creates a value channel that attracts customers and ultimately associates the products and services they buy from that point with the community and/or local economy. ISP partner services, an Ashland Emergency Notification System, and community content all serve to pull potential customers to an online location where they look to as a place to meet their telecommunications needs.

Some ISP partners have inquired about contracting access on the AFN’s WiMax/WiFi wireless system. AFN may be able to negotiate a contract providing access and resale capability in return for capital investment in the construction of the system or other cost offsets that invest the partners in the success of those services.

New services also widen AFN’s operating segments to help reduce the risks associated with dependence on one business line. In the case of Ashland Fiber Network today, changes in costs and prices for Internet service could cause major financial problems. From 87% of its revenues, the Internet service line would lower to 83% in 2013 instead of increasing.



New services would be developed under a multi-award contract through the City of Ashland and its Ashland Fiber Network division. The intent is for this contracting vehicle to cover services offered from “ISP partners” as well, transitioning them to Business Partners. Categories of new services to explore with Business Partners include:

- I. Internet Services
- II. Software Services
- III. Business Services
 - a. Network
 - b. Telephone
 - c. IT Security
 - d. Computer Support
- IV. Consumer Services
 - a. Network
 - b. Telephone
 - c. Security Software
 - d. Computer Support

Advertising

Ashland’s status as a small community, but with desirable demographics and a large tourist economy make actual advertising revenues hard to predict, but work exploring. The AFN channel of AFN Community Connection, Ashland Emergency Notification System, low-cost slow-speed Internet services, and a wealth of vendor services has the potential to generate enough traffic for revenues to be significant, if successful.

Grants

AFN is positioned to qualify for some grants from Federal initiatives. It will pursue grants only as they advance the priorities and direction covered in this strategic business plan.

Billing Services

The City of Ashland can assess servicing the accounts receivables of its business partners. This provides a number of advantages, including more timely receipt of payment and interest income; faster detection on non-paying customers and termination of service; central management of non-paying customers who attempt to hop services to avoid payment; revenues for the City of Ashland’s Utility Billing Customer Service Division; coupling with utility bills; and some economies of scale for AFN’s business partners. This option must be studied more to ensure capacity exists to handle the customer service load in the Utility Billing Customer Service Division and in Ashland Fiber Network. It could then be addressed as term and condition in negotiations with vendors signing on to serve as AFN business partners.

Sell or Franchise AFN System

Selling AFN may be accomplished if an outside provider such is seeking entry into Ashland, and/or if one of the present competitors are interested in obtaining 100% market share. The industry standard acquisition financial model is a multiple of annual cash flow, and/or a market rate price per subscriber. The challenge and feasibility of selling or spinning off AFN can be attributed to its unique public/private partnerships where AFN does NOT actually own the retail customer base, as the customers have no relationship with AFN in the role of wholesaler of services.

Businesses and community members have periodically contacted the City of Ashland about purchasing Ashland Fiber Network. Such an option would allow the City to concentrate on traditional municipal services, but only if the financial impact was positive. City leaders would also need to consider the economic effects of potentially having less competition.

All inquiries to date have involved the City retaining all of the debt, in return for annual payments and possibly a share of revenues. No formal offers have been received as of May 2010.

Sale on Value of Assets

		<i>\$1.3 million infrastructure value + \$3 million goodwill for existing business</i>
Sale Price	\$ 4,300,000.00	
Total Annual Contribution to City Operating Costs	\$ -	
Total Annual Contribution to City Debt	\$ -	
Remaining Principal on Debt*	\$ (13,620,000.00)	<i>Assume City pays off debt</i>
Remaining Principal and Interest on Debt*	\$ -	
Net	\$ (9,320,000.00)	

Sale on Market Valuation of Customers

Sale Price	\$ 4,620,000.00	<i>At \$1,100 per customer with ~4,200 customers</i>
Total Annual Contribution to City Operating Costs	\$ -	
Total Annual Contribution to City Debt	\$ -	
Remaining Principal on Debt*	\$ (13,620,000.00)	<i>Assume City pays off debt</i>
Remaining Principal and Interest on Debt*	\$ -	
Net	\$ (9,000,000.00)	

Sale on Value on Income Multiple

Sale Price	\$ 5,757,879.00	<i>Past three-year average annual revenue of \$1.92 million x 3 Years</i>
Total Annual Contribution to City Operating Costs	\$ -	
Total Annual Contribution to City Debt	\$ -	
Remaining Principal on Debt*	\$ (13,620,000.00)	<i>Assume City pays off debt</i>
Remaining Principal and Interest on Debt*	\$ -	
Net	\$ (7,862,121.00)	

Franchise or Contract Operations

Sale Price	\$ -	<i>Annual revenue of \$2.1 million x 3 Years</i>
Total Annual Contribution to City Operating Costs	\$ 7,313,895.85	<i>Est. \$350,000 per year and \$150,000 portion of sales with 1% growth x 14 Years</i>
Total Annual Contribution to City Debt	\$ -	
Remaining Principal on Debt*	\$ -	
Remaining Principal and Interest on Debt*	\$ (20,000,293.35)	
Net	\$ (12,686,397.50)	

Continued Operation

Sale Price	\$ -	
Total Annual Contribution to City Operating Costs	\$ 6,755,623.13	<i>\$450,000 x 14 Years with average .5% increase</i>
Total Annual Contribution to City Debt	\$ 6,440,000.00	<i>\$460,000 x 14 Years</i>
Remaining Principal on Debt*	\$ -	
Remaining Principal and Interest on Debt*	\$ (20,000,293.35)	
Net	\$ (6,804,670.22)	

*Debt figures are for FY2012 through FY2025

Figures are not adjusted for inflation due to predicted volatility in interest rates expected

Improved performance may allow the City to sell for a net positive in the future

Alternatively, the option exists for the City of Ashland to look at selling Ashland fiber Network at a later date. If AFN's reorganization is successful, there may be an optimal point at which contributions to debt

and central services combine with a high enough sale price to make a sale the City’s best option. The City might also negotiate retaining some ownership of AFN to ensure it continues to serve its role in connecting the community.

Bandwidth Contract

Capturing Decreasing Prices

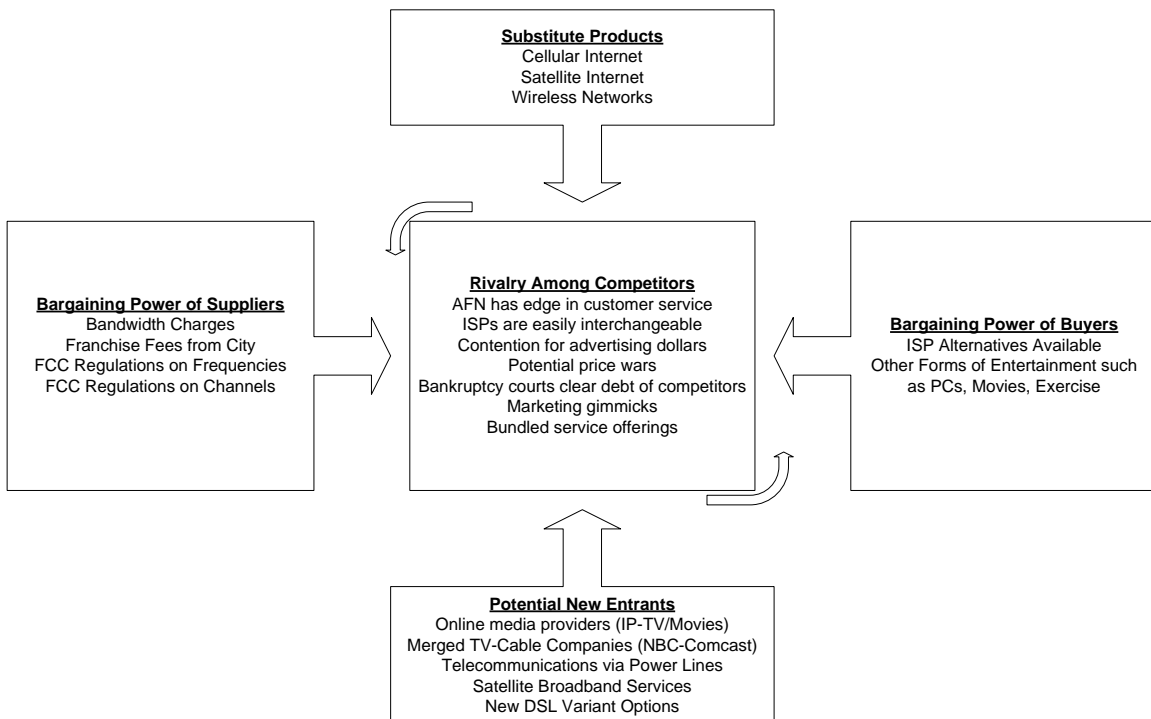
The opportunity for capturing decreasing bandwidth prices over the next several years may exist if local vendors are willing to agree in the City’s Internet bandwidth RFP. As bandwidth continues to become a commodity, capturing falling prices instead of signing a long-term contract at a higher price will serve as a priority goal in AFN management’s negotiations.

Alternative Designs

A component the coming RFP for Bandwidth includes a section for the proposer to be creative and suggest ways to conserve bandwidth. If Ashland Fiber Network can identify a solution and sound migration plan for decreasing bandwidth costs that may otherwise outstrip revenues because of volume usage, the telecommunications utility will move in that direction. As an incentive, AFN would also be willing to look at allowing its vendor(s) to retain a percentage the savings for innovations during the life of the contract to offset what would be revenues lost by helping AFN move to a more efficient option.

Alternative designs may use local and regional partners, network traffic solutions or other means. Because bandwidth prices are forecasted to fall in industry trending, another negotiation priority in AFN’s negotiations will be a contract that incentivizes performance metrics and decreasing prices to automatically extend the life of the contract beyond an initial two years.

Threats



Bandwidth Consumption

Customers connecting to the Internet through AFN and its ISP partners consume ten times more bandwidth than comparable municipalities, according to July 2009 figures from RVA, a market research firm. Plausible explanations include the higher technical sophistication of users in Ashland, fewer alternative pastimes present in small communities, a much larger population with degrees and advanced degrees than average, and the absence of desired programming options from local cable providers.

Consumers are clearly adopting new entertainment products and services. Most of those options consume bandwidth at a rate many times traditional options. As a lead example, the introduction of high-definition video is coinciding with the emergence of Internet-based television and video-on-demand movies as mainstream alternatives. Netflix, Blockbuster, and Google, have all announced initiatives to grow and capture new markets. Developers of new products are typically unconcerned with bandwidth consumption as they are not directly attributable to the costs of bandwidth—it is a matter between the consumer and their Internet provider. Significant for AFN, Ashland's citizens have shown themselves to be early and prolific adopters of those new media options.

Under its existing contract, Ashland Fiber network has bandwidth redundant capacity of up to 350 Mbps. The cost of this bandwidth is high at \$75 per Mbps per month, though AFN's costs are on the lower end of small and rural companies that provide Internet access services. For example, in 2009 responses to the Communications Commission's Notice of Proposed Rule Making, some similarly-sized companies indicated their costs were as high as \$500 per Mbps per month.

In contrast, a comparable cost rate for national/regional companies and those that are near a major metropolitan area will likely range between \$3 and \$18. Bandwidth costs tend to move in relationship with contract size and proximity to major infrastructure. On this point, bandwidth cost serves as an indicator of the systemic disadvantage AFN has as a small player in a national to global market. Without the scale to provide cheaper bandwidth contracts, AFN must bring bandwidth costs as low as possible through effective contracting.

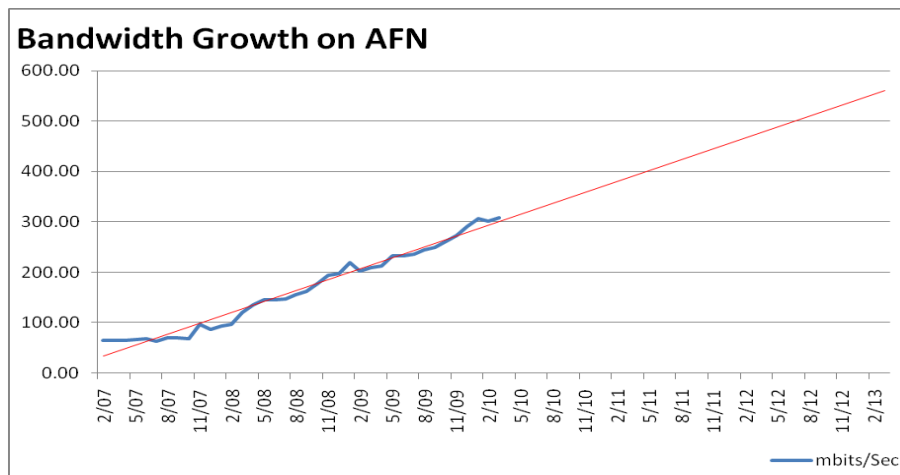
Rapid Increase

Telecommunications providers are working to redefine Internet service in the minds of their customers due to rapidly escalating bandwidth consumption in the United States and other parts of the world.

Recent Internet product advances now include tens of millions of movie titles available from Movielink, Netflix, iTunes, Cinema Now, Amazon Unbox, and other providers of on-demand video services. These companies supply high-bandwidth entertainment to AFN and Charter customers. This adds to AFN's and Charter's costs. Consumers may also have high-definition video to their game console; PC's pulling computer and software updates while watching YouTube videos; and other on-network consumer devices connected at the same time. An average length high definition movie consumes 4-5 gigabytes of bandwidth per download, multiplied by thousands of potential customers using the service. Google TV announced in May 2010 that it will introduce an Internet-based television system by the fall of this year that will give viewers access to "millions" of videos and shows.

These examples illustrate why projected growth in bandwidth consumption is Ashland Fiber Network’s greatest threat on the expense side of its business. Currently, AFN pays \$75 per MB/sec for redundant Internet bandwidth. As a critical point, obtaining redundant bandwidth at reasonable cost over next three years will still results in a projected cost of \$408,000 by 2015, compared to ~\$185,000 this year.

Exponential growth in bandwidth consumption is the greatest threat for small and regional Internet providers like AFN. Some are experiencing congested networks and negative customer feedback. Indeed, much like highways, the popularity of new sites and services affect traffic volume with some infrastructures unable to support those trends. The May 2010 announcement of plans by Google, Intel, and Sony for a major Fall 2010 release of GoogleTV is seen by some industry analysts as a defining moment in the struggle between content versus bandwidth.



Based on consumption data, AFN’s two key customer cohorts are (1) Non-traditional television viewers who are using Internet-based media to access entertainment content traditionally watched on cable television and (2) users who connect to file sharing site and peer-to-peer networks to download entire libraries of movies, often illegally. These groups are driving the AFN’s utilization increase, the growth in its operating costs, and occasionally even negatively impacting network performance. Long-term, Ashland Fiber Network and other providers will need to solve the growth in bandwidth consumption to survive financially.

The telecommunications and Internet industries are dynamic. Major innovations, consumer products, and services launch frequently. The relatively recent emergence of Internet-based media as a primary option for entertainment is a critical development and AFN must adjust to customer demands quickly.

Overhead Costs and Debt

AFN’s expenses show peculiar ratios compared to similar businesses. Selling, General, and Administrative (SG&A) expenses, the income statement item that depicts overhead costs not directly tied to the production of goods or services, averaged approximately 22% of total revenues for telecommunications industry companies in 2009. Salaries, benefit and pension costs, marketing costs, insurance, rent and utilities, fleet administrative charges, and maintenance are all categorized under

SG&A. AFN’s equivalent rate in the Fiscal Year 2011 budget, not including debt, is projected to be more than 50.9%. The City has not increased the internal service charges for four years.

An essential consideration in managing operating costs is the impact AFN’s debt costs can have on City of Ashland municipal services. What AFN is not able to pay is passed on as a liability to City Departments dollar for dollar, including the Information Technology Department, which is funded through central services charges. For this reason, the telecommunications utility is required to continue to pay operating costs that are exceptionally high by all external standards.

2011 Expenses, Adjusted for One-Time Debt Payment		
Personnel and Benefits	\$ 674,548	31.8%
Operating-- Bandwidth	\$ 185,000	8.7%
Operating-- Central Services	\$ 405,685	19.1%
Operating-- Debt	\$ 356,000	16.8%
Operating-- All Other	\$ 267,472	12.6%
Capital	\$ 233,500	11.0%
Total	\$ 2,122,205	100.0%

A cost factor all employers must manage is employee salaries and benefits. Costs for the City of Ashland are high, with a benefits load averaging above 50% of salary. This effectively prevents AFN from ramping up new services internally as the return on investments is hampered by the incremental costs. For AFN, the cost of labor is an artifact of what it takes to be a competitive employer in the Oregon union and government environment. As such, it is considered non-mitigable and AFN will need to use contract services and its partnerships with businesses to improve its service offerings. With rare exception, the City cannot afford to develop new products internally.

The City of Ashland must pay \$1.43 million annually for debt financed through a full faith and credit bond in 2004. Debt and the interest rate on that debt are serious weaknesses in Ashland Fiber Network’s business. In 2011, debt alone will constitute almost 28.4% (\$700,000) of AFN’s total expenditures. It is projected to constitute between 17% and 21% of all expenditures in the following two years. This seriously compromises AFN’s ability to balance its bottom line and inhibits investments into the infrastructure to support coming demand. Debt is a weakness that will continue to negatively impact AFN’s business in a substantial way, but must be carried.

Gauging AFN against telecommunications companies reveals a large portion of the companies that built out or serviced networks in that period AFN began business are defunct and/or were reorganized under bankruptcy protection to handle heavy debt loads. Global Crossing, Covad Communications, Wordcomm (hastened by fraud), McLeodUSA, Mpower, 360networks, Metromedia, XO Communications, and Williams Communications Group all eliminated or greatly reduced their debt in bankruptcy. Still, only a few survived their bankruptcy reorganizations. Though the City of Ashland and AFN have struggled to set the telecommunications utility on strong financial ground, it has not shirked its responsibilities and is paying off its debts.

Emerging Technologies

High-Speed Wireless

Threats looming over the near horizon include the potential market entry of regional wireless telecom providers such as Clear and Verizon. Larger competitors have the advantage of sizeable marketing budgets and the ability to absorb short-term losses to attract customers.

The deployment of WiMax in Ashland, or AFN Max, will address some competitive concerns. The intent is to achieve 99% coverage of the Ashland community with some type of AFN service has the secondary benefits of slowing customer loss if demand for high-speed wireless services grows rapidly. The positioning may also discourage other companies from building wireless infrastructures that have a much longer return-on-investment period, as well.

Specialized Networks

The communications industry may be on the precipice of a transformation. This evolution is characterized by three drivers: First, deregulation launched a new class of carriers that are spending billions to build out their networks and develop innovative new services. Second, the decline in the cost of fiber optic cabling and Ethernet equipment is beginning to make them a feasible option for limited-access networks. Third, the Internet has spawned genuine demand for broadband services, leading to unprecedented growth in Internet protocol (IP) data traffic and putting pressure on carriers to upgrade their networks.

The convergence of these factors is leading to a fundamental paradigm shift in the communications industry, a shift that will ultimately lead to widespread adoption of a new optical IP Ethernet architecture that combines the best attributes of fiber optics and Ethernet technologies. This architecture has the prospect of becoming the new dominant means of delivering bundled data, video, and voice services. By default, these resources will not be mainstream, but have the potential to alter consumer usage patterns.

IP-Based Television and Movies

As noted previously in this document, entertainment video and audio downloads are cutting into AFNs margins considerably, as external organizations and customer use bandwidth to receive and redistribute content. Technically the cost for bandwidth is not between the customer and AFN, but between AFN and the greater Internet. Thus, if traffic could be retained within the AFN network and traffic to the Internet reduced, AFN could greatly reduce its bandwidth expenses. Options for bringing video and movie content into the AFN network may be the only viable means for controlling spiraling bandwidth costs.

One method is to provide an on-network source for video services that provided to customers via IP multicast on the local network. This would entail obtaining programming either in IP already, or transcoding it to IP, and providing it to customers via a subscription service, much like with traditional cable television. Although content providers have not worked with Internet providers in the past, new options may open as access to content begins to perform poorly for a critical mass of consumers—e.g., AT&T customer iPhone activity I many parts of the nation.

A critical threat coming in the fall of 2010 is Google TV, which is slated and publicized to have a massive launch. Google TV intends to create an interactive platform that collapses the past division between the television and Internet browsing. The hardware and service are being developed in partnership with Sony, Logitech, and Intel, indicating enough resources will back Google TV's introduction to help it be a quick success. Google owns YouTube, which is simultaneously working on a viewer for Google TV called "Lean Back" to bring web video and interactive playlists to the televisions.

Google TV will unquestionably increase bandwidth traffic for Ashland Fiber Network. Initial media hype and curious users are expected to generate enormous bandwidth activity on the Internet, giving a first indication of how consumers will fare in aggregate. A strong product coupled with minimal reported Internet performance problems could incite incredibly high demand and cause national Internet providers to scramble to handle their customers' activity.

Google may change the way consumers view TV and this will have significant impacts on AFN's financial performance. Google TV represents an AFN Internet service revenue opportunity that is out of proportion to the threat of extremely higher bandwidth costs. Google TV will also be a threat to income from leasing out AFN's cable television head-end, as it will be a direct competitor for viewers.

Open Government and Competition

The City of Ashland works to conduct its business in a transparent manner for open public involvement and insight. This approach has the potential to inhibit the successful management of Ashland Fiber Network at times, by openly revealing and communicating AFN's business plans, products, and direction. Nonetheless, AFN will operate with the ambition of being a strong community resource and will always conduct itself as an open part of government that welcomes public input.

Appendix C—Current AFN Rates Structure

The following chart is AFN's current flat wholesale rate structure, implemented in January 2009.

Ashland Fiber Network Products

Effective January 1, 2009

AFN BRONZE - The *E-mailer's* Internet

Dial Up Alternative

Up to 256 Kbps Download | 256 Kbps Upload

\$15.74 /month

AFN SILVER - The *Moderate User's* Internet

DSL Alternative

Up to 1.5 Mbps Download | 256 Kbps Upload

\$25.19 /month (Non Certified VOIP QoS available*)

AFN GOLD - The *Heavy User's* Internet

Charter Alternative

Up to 5 Mbps Download | 256 Kbps Upload

\$27.77 /month (Non Certified VOIP QoS available*)

\$25/month additional fee for 1st Static IP Address

\$10.50/month additional fee for each additional to 6 total

\$5.25/month additional fee per address for Dynamic IP

AFN GOLD PLUS PROMOTION - The *Home Business* Internet

Up to 7 Mbps Download | 1 Mbps Upload

\$47.77 /month (Non Certified VOIP QoS available*)

\$26.25/month additional fee for 1st Static IP Address

\$10.50/month additional fee for each additional to 6 total

\$5.25/month additional fee per address for Dynamic IP

AFN PLATINUM - *Small Business & Serious Gamers'* Internet

Synchronous/Burstable up to 10 Mbps

\$69.77 /month (Non Certified VOIP QoS available*)

\$26.25/month additional fee for 1st Static IP Address

\$10.50/month additional fee for each additional to 6 total

\$5.25/month additional fee per address for Dynamic IP

*QoS SUPPORT @ \$3.50/month per modem

QoS ensures that Internet-based digital phone service has priority on the AFN network, increasing call quality.

Appendix D—Draft AFN Rates Structure

The following chart is AFN’s proposed rate structure, to be updated with partner input and implemented in January 2010.

AFN Rates Structure (Proposed)			
Community Access—<u>Low-cost</u> service provided to Ashland (does not include hardware)			
Down		0.256	Mbps
Up		0.256	Mbps
Wholesale Cost	\$	9.00	/Month
Retail	\$	9.00	/Month
Cap		0.100	GB
Basic—General Internet usage with minimal online media usage			
Down		1.500	Mbps
Up		0.256	Mbps
Wholesale Cost	\$	25.00	/Month
Est Retail Cost	\$	30.00	/Month
Cap		30.000	GB
WiMax—High-speed wireless access in covered areas			
Down		3.000	Mbps
Up		0.256	Mbps
Wholesale Cost	\$	-	/Month
Est Retail Cost	\$	48.00	/Month
Cap		100.000	GB
Start	\$	200.00	Or \$8/mo rent
Choice—General Internet usage with some usage of online media			
Down		5.000	Mbps
Up		1.000	Mbps
Wholesale Cost	\$	28.00	/Month
Est Retail Cost	\$	35.00	/Month
Cap		100.000	GB
Preferred—General Internet usage with more usage of online media			
Down		10.000	Mbps
Up		2.000	Mbps
Wholesale Cost	\$	38.00	/Month
Est Retail Cost	\$	45.00	/Month
Cap		100.000	GB
Family Entertainment—Regular usage of web-based television and movies			
Down		15.000	Mbps
Up		2.000	Mbps
Wholesale Cost	\$	45.00	/Month
Est Retail Cost	\$	55.00	/Month
Cap		300.000	GB

Gamers—For advanced gamer, MMORG, and media Internet usage

Down	20.000	Mbps
Up	3.000	Mbps
Wholesale Cost	\$ 55.00	/Month
Est Retail Cost	\$ 65.00	/Month
Cap	200.000	GB

Ultimate Home— Premium home package

Down	25.000	Mbps
Up	5.000	Mbps
Wholesale Cost	\$ 65.00	/Month
Est Retail Cost	\$ 75.00	/Month
Cap	300.000	GB

Includes Quality of Service and 1 Static IP Address

SOHO— Small Office/Home Office usage with higher two-way traffic

Down	15.000	Mbps
Up	4.000	Mbps
Wholesale Cost	\$ 53.00	/Month
Est Retail Cost	\$ 65.00	/Month
Cap	300.000	GB

Includes Quality of Service and 4 Static IP Address

Small Business—Capacity to support Internet usage, IP-based phones, and websites

Down	25.000	Mbps
Up	10.000	Mbps
Wholesale Cost	\$ 73.00	/Month
Est Retail Cost	\$ 85.00	/Month
Cap	500.000	GB

Includes Quality of Service and up to 4 Static IP Address

Fiber—Fastest speed for all intensive uses

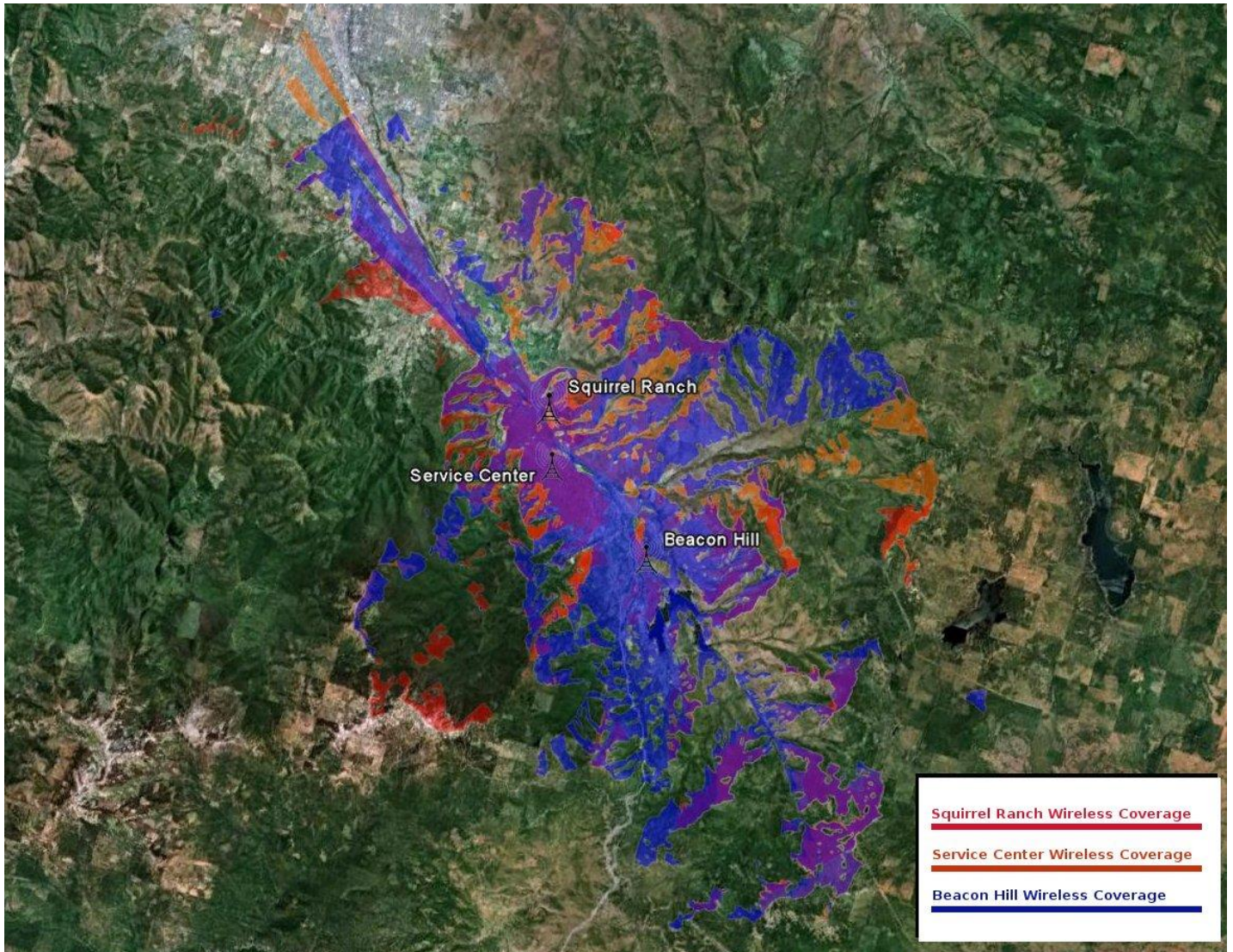
Down	100.000	
Up	100.000	
Wholesale Cost	\$ 300.00	
Est Retail Cost	\$ 400.00	/Month
Cap	Unlimited	

Includes Quality of Service and up to 6 Static IP Address

Wireless—Supplemental service for customers wanting access to AFNAnywhere or AFNMax

Add-On Mobile	\$ 5.00	/Month
Rentals	\$ 25.00	/Week

Appendix E—AFN Max Wireless Coverage



Appendix F—Ashland Census Data

2000 Census Information	Ashland, OR		US Averages
Total Population	19522		
2007 Estimate*	21630		
Area (Square miles)	6.5		
Government	Strong Mayor		
Gender			
Male Population	9003	46.12%	49.10%
Married (Older than 15 years)	3547	39.40%	56.70%
Female Population	10519	53.88%	50.90%
Married (Older than 15 years)	3644	39.60%	52.10%
Age			
Median Age	37.9		35.3
<5 Years Old	802		
>18 Years Old	15846	81.17%	74.30%
≥65 Years Old	2896	14.83%	12.40%
Race/Ethnicity			
White	17873	91.55%	75.10%
Black	118	0.60%	12.30%
American Indian/Alaska Native	199	1.02%	
Asian	365	1.87%	
Native Hawaiian/Pacific Islander	26	0.13%	
"Some other race"	333	1.71%	
"Two or more races"	608	3.11%	
<i>White/Hispanic Cohort</i>	<i>695</i>	<i>3.56%</i>	<i>12.50%</i>
Household Descriptors			
Population in Households	18308		
Population in Group Quarters	1214		
Average Household Size	2.14		2.59%
Average Family Size	2.72		3.14%
Housing			
Total Housing Units	9050		
Number of Occupied Housing Units	8537	94.33%	
Occupied by Owner	4456	52.20%	
Occupied by Renter	4081	47.80%	33.80%
Vacant	513	5.67%	
Education			

High School Graduate or Higher	11660	94.60%	80.40%
Bachelor's Degree or Higher	6240	50.60%	24.40%
Labor			
Percentage In Labor Force		64.20%	63.90%
Mean Travel Time to Work (minutes)	16.7		25.5
Median Household Income	\$ 32,670.00		\$ 41,994.00
Median Family Income	\$ 49,647.00		\$ 50,046.00
Per Capita Income	\$ 21,292.00		\$ 21,587.00
Families Below Poverty Level	570	12.50%	9.20%
Individuals Below Poverty Level	3598	19.60%	12.40%

* -- Portland State University, Center for Population Research and Census