

# Benton PUD Broadband

## Introduction

In 2000, the Washington state legislature passed legislation enabling public utility districts (PUDs) to provide wholesale telecommunication services. PUDs are not authorized to provide telecommunication services to end users; instead, the law requires that utilities operate in partnership with retail service providers to connect customers to their networks. Benton PUD has been in the broadband business since 2002 and currently has more than 400 miles of fiber-optic cable installed throughout Benton County. The District is a founding member and one of ten current owners of Northwest Open Access Network (NoaNet). NoaNet operates a world-class high-speed broadband network with over 3,000 miles of fiber-optic cables installed throughout the state including a major network hub located at Benton PUD's offices in Kennewick.

NoaNet and its members operate reliable, open-access wholesale broadband communications networks providing highly reliable, high speed broadband services to schools, libraries, hospitals, government agencies and private businesses. Most recently, NoaNet partnered with more than 50 public and private organizations including public utility districts, ports, tribes, cities, counties and competitive carriers to secure \$180 million in stimulus funds from the American Recovery and Reinvestment Act of 2009 to expand broadband services across the state of Washington. As a sub-recipient of this grant, the District received \$2.1 million to extend fiber to underserved areas in rural southern and central portions of Benton County. The fiber optic lines built with these funds have also been instrumental in NoaNet's statewide partnership to provide fiber optic services to remotely located cellular towers in rural areas like Benton County. High speed fiber-optic based service to towers has been key to providing next generation cellular telephone services to many areas in the Tri-Cities.

Today, Benton PUD generates about \$2 million annually in broadband revenue which exceeds annual expenditures and results in a net positive cash flow. Over the last seven years, broadband has generated \$2.8 million in net positive cash flow.



Over the last seven years, Benton PUD's Broadband has generated \$2.8 million in positive cash flow.

## Open Access Model

Benton PUD's broadband network and business structure is based on an "open access" model. This means that any entity may use the system even if they do not own physical infrastructure themselves. The open access model along with a transparent and non-discriminatory rate structure has made Benton PUD's broadband network a key contributor to business recruitment, retention and expansion in our community. In addition, open access has resulted in a number of significant partnerships with both private and public entities to improve health care, education, emergency services and the overall quality of life in our community.



## Benefits of a Public Fiber System

Benton PUD broadband has brought numerous benefits to our community including world-class high speed internet access to schools, libraries, governments, emergency responders, and health-care providers. Further, several national cell phone carriers are using Benton PUD fiber for data transport from 70 cellular tower sites. This service has helped enable 4G LTE cellular service in the Tri Cities. These partnerships between Benton PUD, NoaNet and private cellular telephone carriers in Benton County are a testimony to the reliability, speed and extent of NoaNet and Benton PUD's fiber-optic networks and to the ongoing value of public broadband networks in our community.

As indicated earlier, wholesale public broadband in our state operates under an open access model. That means that any retail service provider, or other wholesale provider, can use the system without fear of discriminatory pricing. Further, this model encourages public/private partnerships to form to help build the infrastructure for the community.

The District also receives many internal operational benefits from the broadband network including connectivity between the Kennewick and Prosser administrative facility computer networks and data transport services for our advanced metering infrastructure (AMI) and substation remote control systems. Energy readings and diagnostic data from the District's over 51,000 electric service meters are relayed from AMI radio transceivers located on the hill tops around the area through fiber-optic cables connected to the broadband network. Fiber-optic lines are also providing high speed connections to most of the District's urban area distribution substations for improved remote control and monitoring of high voltage equipment that is essential for reliable service to our electric customers.

## Broadband Financial Information

Benton PUD accounts for its financial activities within a single proprietary fund titled the Electric System. The Electric System is used to account for the sale, purchase, generation, transmission, and distribution of electric energy, as well as the revenues and expenditures of wholesale telecommunication (broadband) services. As such, our broadband network assets reside in the Electric Fund along with other electric system assets such as poles, wires, and substations.

Benton PUD reports each month on broadband activities. Since inception in 2001, the net cash funding of broadband through electric rates is \$10.1 million. Over the past seven years, broadband has generated \$2.8 million in positive cash flow – in other words, revenues have exceeded both capital and operation expenditures.

The net book value of broadband assets owned directly by Benton PUD is about \$11.2 million. The gross value of these assets is \$21.8 million, of which, \$7.2 million was funded through partnerships and grants.

In addition to the broadband assets directly owned by Benton PUD, Benton PUD has a 20.72% ownership share of NoaNet, which has about \$90 million of assets (net book value).

The following table shows broadband financial information for inception to date, most recent six years, and last year.

(in millions)	Inception to Date 2001 - 2017	Last 7 Years 2011 – 2017	Last Year 2017
Revenues	\$18.4	\$13.6	\$2.16
Operating Expenses	(10.6)	(6.0)	(0.85)
NoaNet Assessments & Support	(3.3)	(0.1)	-
Capital Investments	(21.8)	(8.9)	(1.04)
Partnerships/Grants	7.2	4.1	0.09
<b>Net Cash Flow</b>	<b>\$(10.1)</b>	<b>\$2.7</b>	<b>\$0.36</b>

### *Explanation of broadband financial information:*

Revenues: Amounts charged to Retail Service Providers (RSPs) who provide service to the end user.

Operating Expenses: Expenses incurred to operate and maintain the broadband system.

Benton PUD broadband assets:  
**414 miles** fiber-optic lines  
**\$11.2 million** net book value

NoaNet Assessments & Support: As noted above, the District is a founding member of NoaNet. Members of NoaNet were assessed amounts to provide for the operation of NoaNet. NoaNet has developed into a self-sustaining entity and has not had an assessment since 2011.

Capital Investment: Expenditures made to install fiber throughout our community.

Partnerships/Grants: A significant portion of the capital investment has been paid through partnerships and grants. These have included federal and state agency funds as well as national and local private business entities.

Net Cash Flow: This represents the total amount of cash expenditures. The net cash outflow of \$10.1M has funded 1) 414 miles of fiber-optic cable and other assets throughout Benton County with a net book value of \$11.2M, and 2) a 20.72% ownership in NoaNet with a net book value of approximately \$90M. Broadband has been cash flow positive since 2011.

Benton PUD includes a broadband report in each month's financial statement packet.

## How Wholesale Broadband Rates are Set

Our broadband business operates in a competitive market where customers choose providers based on bandwidth needs, relative prices to the competition, and quality of service. As such, we use a broader set of competitive pricing principles with the objective of maximizing positive cash flows for our broadband business over time.

Setting broadband rates is fundamentally different from setting electric rates. Electric utilities operate in a regulated monopoly. Since there is no competition in a regulated monopoly, electric rates are set on a cost-based approach using a Cost of Service Analysis (COSA) to establish rates.

Broadband rates are set to generate as much revenue as possible in order to cover operations, maintenance, and capital costs to generate a positive cash flow over time. National and regional markets influence broadband prices in the Tri-Cities. These markets are comprised of large telecommunication and cable companies with end-user (retail) relationships spanning residential and business class broadband services. If prices are higher than the market, customers are likely to find another provider leading to a decrease in revenue.