Executive Summary



Advanced Broadband Business Case - Fiber Build-out in Huntington

Introduction

CostQuest Associates presents this Executive Summary of the business case for High-Speed Broadband deployment across Huntington. The purpose of this summary is to present a full fiber deployment (FTTp) scenario for all residential, business and anchor institution locations across the City. The Advanced Broadband Model and resulting report includes a financial model and business case for build out of Gigabit-speed broadband deployment in Huntington. The questions that are intended to be answered with this analysis include:

- Is it economically feasible to build and maintain fiber to the home and business throughout the community?
- How do the economics of this deployment work for each neighborhood/area in Huntington?
- What is the upfront investment to build the network?

The results are, in fact, a feasibility study that can be used to support policy making and economic development work for the community.

The model assumes a 10-year business case that includes all aspects of deploying and maintaining an advanced broadband network across the community. This includes capital deployment costs, operations and maintenance costs, recurring and non-recurring revenue and success-based capital costs related to a growing subscriber business. The model uses the most advanced geospatial and network modeling available today. CostQuest's modeling approach is the same used by the FCC and many national and local broadband providers.

This effort was developed to support the Huntington/Cabell County and Wayne County County Technology Plan developed through the Local Technology Planning Pilot project established by the West Virginia Department of Commerce and the WVBI.



Summary of Approach

The methodology used to model broadband deployment across the City is data-driven and based on the same geospatial and economic modeling used by the FCC and the telecommunications industry. This Gigabit City Model drives the results of the study.

- The Gigabit Broadband Model estimates the costs and potential profitability and ultimately the viability of the network
- The underlying geospatial/mapping model determines an efficient routing and architecture of the network
- The underlying cost model's use of an extensive demand and demographic database provides the ability to understand potential take rates, costs and the revenue flows related to the network plan to understand the economics of each "fiber-hood"
- The Study looks at deployment costs, the costs to maintain the network and the expected revenue

Summary of Results -Huntington, WV

The results of the financial modeling are driven by a core set of assumptions on take rate, engineering parameters, costs inputs and revenue models. These assumptions can be changed and the results can be updated instantly. Key assumptions for these results can be found on the following page of this summary.

Business Case Summary

ess Case Summary								
CostQuest Associates, Inc.		Inputs Used for Scenario (from "Key Use Assumptions" tab)						
			Discount Factor	8.0%				
			Length of Study	10				
		Average	Useful Life of Assets	20.5				
			Customer Type					
				Residential	Business			
Business Case Summary		Video & High Speed Data	Install Charge	\$ 300.00	\$ 300.00			
			Monthly	\$ 120.00	\$ 150.00			
	High Speed Data	Install Charge	\$ 300.00	\$ 300.00				
		Monthly	\$ 70.00	\$ 100.00				
	Low Speed Data	Install Charge	\$ 300.00	\$ 300.00				
	Low Speed Data	Monthly	\$ -	\$ -				
Demand/Subscribers								
Total Locations:	27,363.00	Housing Units:	22,955.00	Business Locations:	4,408.00			
Assumed Take Rate:	35.2%	Assumes a market-wide average take rate levelized over 10 years. Take rates vary across rate plans/services and locations types such as residential and businesses.						
Total Subscribers:	8,444.45	Residential:	6,254.23	Business/Orgs:	2,190.23			
Initial Investment with Succe	ss Capital							
Total Initial Inve	estment (upfront and succe	ss based capital costs)	to Deploy Network:	\$24,690,009.79				
Summary of Business Case (le	evelized multi-ye	ar run rate)						
Total Annual Costs:	\$6,781,324.19	Annual Capital Costs:	\$2,869,065.33	Annual Operational Costs:	\$3,912,258.86			
Annual Revenue:	\$6,516,958.76	Annual C	Annual Contribution Margin: (\$264,365.43)					
Subscriber Statistics								
		\$ 3,859.04						
	Net Non-Recu	urring Cost ("Custom	er Turn Up") per Line TOTAL	\$ (76.92)				
		\$ 84.88						
Per Active Subscriber S		\$ 88.33 \$ 37.37						
			Monthly Capital Costs per line Monthly Operating Expenses Per Line					
		Le	\$ 50.96 \$ (3.44)					
		LE	ý (5. 44)					

Area Summary



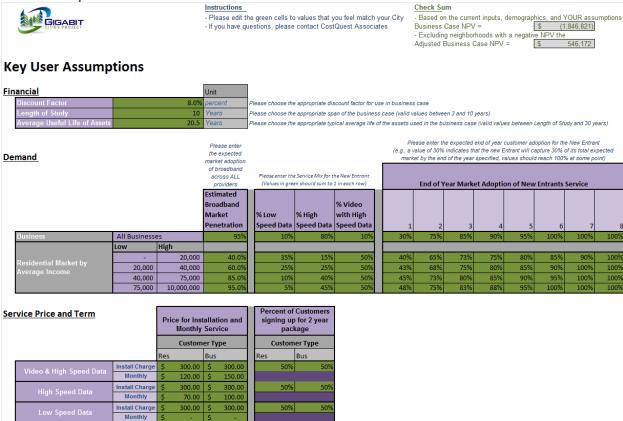
Region ("Fiber-hood") Summary

	Total Locations Passed:	Estimated Subscribers:			Annual Contribution Margin:	
All Regions	27,821	8,444	\$6,781,324.19	\$6,516,958.76	(\$264,365.43)	
BVLHWV01	4,463	1,515	\$1,258,034.40	\$1,245,673.27	(\$12,361.13)	
DOTOWV01	10,705	2,918	\$2,163,531.09	\$2,241,562.21	\$78,031.13	\$ 546,172.40
EAEDWV01	5,438	1,661	\$1,399,776.64	\$1,219,433.30	(\$180,343.34)	\$ (1,249,170.34)
SOHIWV01	2,284	950	\$869,738.53	\$782,176.15	(\$87,562.38)	\$ (619,735.42)
WEEDWV01	4,931	1,401	\$1,090,243.53	\$1,028,113.83	(\$62,129.71)	\$ (421,173.58)

Key Assumptions and Inputs

The following are the key assumptions and inputs that drive the outcome of the model. These parameters, and others, can be adjusted.

Business Case Inputs



Other Key Inputs/Parameters

 $\label{lem:decomposition} \mbox{Depreciation, cost of money and income taxes}$

Revenue

 ${\it Customer\,Prem\,equipment--}\,({\it Modem,\,Set\,top,\,remote,\,etc})$

Structure Sharing -- Sharing of feeder and distribution cable on same structure

Fiber -- Drop Material Prices/ft

Fiber -- Fiber Cable Material Prices/Ft

Fiber -- Material Prices for Termination of Fiber on Panel in Node Location

Eqpt Material Prices and Capacities -- ONT
Eqpt Material Prices and Capacities-- Fiber Splitter

Eqpt Material Prices, Labor and Capacities -- Fiber Drop Terminal

Equipment Material Prices and Capacities -- OLT

Labor Rates

Miscellaneous Loadings
Buildings -- Free Building Space
Buildings -- Land and Building CAPEX
Fiber -- Cable placement and splicing hours
OPEX Factors -- Operating Expense factors

Plant Mix - Mix of Aerial, Buried and Underground plant Structure -- structure (incl Buried) Sharing with other Parties

Installation Expenses -- Data Only

Installation Expenses -- Video / High Speed Data

 $Conduit -- Underground\ conduit/duct/innerduct\ placement\ hours\ for\ owned\ conduit\ systems$

Excavation costs -- Buried Excavation Hours
Excavation costs -- Underground Excavation Hours

Poles -- Pole Placement Hours for owned poles

Conduit -- CAPEX if conduit is rented

 $Conduit -- \ UG \ Material \ prices \ for \ conduit, \ duct/innerduct, \ manholes \ if \ conduit \ is \ owned$

Poles -- CAPEX for attaching cable to non-owned pole Poles -- Pole/Anchor/Guy Material Prices if owned poles

Conduit -- Duct Rental Rates

Pole/Conduit -- Mix of Free vs Non-Free

Poles -- Attachment Rates

 $\% \ Customers \ Choosing \ each \ of fering: LowData, HighData, Video \& HighData\\$

CircuitPowerFactor SwitchPowerFactor

UseRegionalCostAdjustment FLEC to Book Capex adjustment

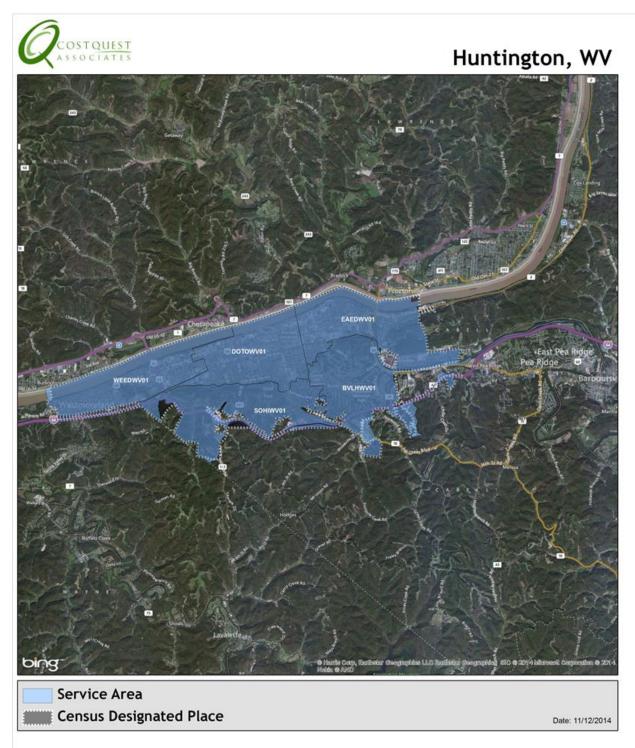
AssumedAreaDensity
AssumedCompanySize

Poles
Conduit
CarrierType
Company
Length of Study
DiscountFactor

Geographic Area

The geographic area modeled for the network deployment includes only those areas within the city limits, defined as a Census Designated Place. A process was also developed to aggregate neighborhoods together into common fiber service areas – or "fiber-hoods". This allows the financial analysis to be done on a neighborhood-by-neighborhood basis.

MAP – SOURCE TAB CDP MAP



Next Steps - Full Advanced Broadband Study Report

CostQuest will be releasing a full report on the feasability of Advanced Broadband service for the community. This report will include full financials for each community, network design mapping and data, documenation on methodology, and a report on guidance for steps the community should consider taking given the information presented.

The Advanced Broadband Report can help to support the following:

- Help community stakeholders develop an understanding of the economic feasibility of a gigabit speed network –
 City-wide or otherwise
- To support advocacy to policy makers and stakeholders on the value of such a network
- To manage procurement of a private partner to deploy or manage the network and business
- Manage leverage that the city might have, such as Right-of-way, city assets/equipment, permitting and franchising
- To manage architecture issues and other matters that may serve to expedite build-out
- Neighborhood demographics, demand and economic data will help to effectively manage deployment and adoption
- Can be used to advise applications for grant, loan and subsidy programs