Presentation on Broadband/Telecommunications Survey and Recommendations

To Thurston PUD Commissioners

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Thurston PUD

Assessment Reports

- Thurston PUD Broadband Feasibility Study & Outreach Summary
  - Written for the Thurston PUD Board of Commissioners
- Thurston PUD Broadband Feasibility Assessment
  - Written to satisfy CERB grant requirements

The Thurston PUD Commission Passed Resolution 21-04 on February 9, 2021, in which it:

Considered its role in pursing, creating and developing telecommunications services throughout rural Thurston County

1) Noted COVID-19 exposed inequalities in access to broadband services
2) Recognized that more students were enrolled in online education services.
3) Established a goal of evaluating the ability of Thurston PUD to provide Broadband/Telecommunications services.

The Thurston PUD Commission Passed Resolution 21-04 on February 9, 2021, in which it:

In considered its goal in evaluating the ability of Thurston PUD to provide Broadband/Telecommunications services to minimize the inequalities to provide greater access to Broadband/ Telecommunications, the Board established two Action steps:

ACTION STEP 1: Coordinate with Thurston County School Districts to identify what is needed to support students through education and potentially address inequities and provide greater access to broadband and other telecommunications technologies.

ACTION STEP 2: Coordination with other entities including but not limited to libraries, fire districts, tribes, parks, medical services, small businesses, higher education and the needs of Thurston County citizens.

Discussion of Action Step No. 1 - Coordinate with Thurston County School Districts

- PUD entered into a contract with NoaNet
  - Assess demand and current broadband prospects
  - Perform modeling and business planning
- Engaged Superintendents, IT Professionals and Communicators from
  - Rochester School District
  - Tenino School District
  - Rainier School District
  - Yelm School District
  - Griffin School District
  - North Thurston School District
  - Olympia School District
  - Tumwater School District

Discussion of Action Step No. 1 - Coordinate with Thurston County School Districts

- Delivered detailed presentation and provided informational materials
- Provided Communications Toolkit that included link to the survey
  - Newsletters
  - Letters to families
  - Social Media
  - Print
- Collaborated on messaging to families
- Evaluated school district assessment periods

Discussion of Action Step No. 2 - Coordinate with Other Entities

- Libraries
- Fire Districts
- Intercity Transit
- Nisqually Tribe
- Economic Development Associations
- Civic Associations
- The Olympian
- Faith Institutions Association
- Local Municipalities

Discussion of Action Step No. 2 - Coordinate with Other Entities

- Communicated through email, phone, website contact, social media
- Delivered detailed presentations
- Provided toolkits
  - Social media links
  - Social media images for posting
  - Bookmarks
  - Draft messaging for clients, customers, patrons
  - Social media draft messaging
  - Flyers, Pull-tabs
  - Reviewed and approved messaging from collaborators

Summary of Results

- Survey
  - Recorded addresses, service provided (if any), rates, satisfaction, reliability and type of service.
  - 1,488 survey responses
    - 1,369 single family homes
    - 11 commercial locations
    - 112 multi-family residences
- Speed Test
  - Tied to geographical information
  - Determines if FCC broadband definition is being met
  - 1,038 respondents took the speed test.

NoaNet Conclusion: Cost vs. Actual Need

Our community outreach study and evaluations have concluded that the county's urban areas have high-speed broadband available, however, significant portions of residents are unsatisfied with the costs of services being provided by the incumbent providers.

The satisfaction levels reported in the survey, speed test data, and market research suggests that cost, rather than infrastructure availability, is the primary barrier to access to high-speed internet in the urban communities of Thurston County.

NoaNet Conclusion:
Projects Underway in Thurston County

- If the PUD uses subsidization and high service take-rates, the project could *possibly* be sustainable.
- ***However, with existing service providers in the area, and our knowledge of broadband infrastructure deployment efforts and upgrades currently underway, this scenario appears unlikely.***

General Manager's Summary

- In summary, NoaNet's report reveals:
  - For **urban** areas, cost is the greatest barrier to high-speed internet access.
  - For **rural** areas, many, if not all, the highly populated regions fall under existing private-sector service territory or have deployment efforts underway.
    - A single entity that has pre-engineered most of rural Thurston County has been awarded millions to prepare their shovel-ready projects.
      - Rochester School District
      - Yelm School District
      - Rainier School District
      - Tenino School District
    - Established providers have been awarded millions from state and federal agencies to upgrade their current services and service areas.
      - Rochester School District
      - Tenino School District

General Manager's Recommendation

I recommend that Thurston PUD does not enter into the Broadband line of business for the following reasons:

- **The broadband landscape in Thurston County will be adequate.**
  - Established ISPs have extensive facilities and markets in urban Thurston County.
  - Large private ISPs are well-established and dominate the market.
  - Local ISPs have recently received millions in funding to upgrade their facilities.
  - Competitive telecom companies are poised to gain market shares with owned & shared assets. Private/Public partnerships have already gained traction and will continue to dominate other counties.

12-Year Cash Flow Model

- Not a sustainable venture
- The net cash flow is a loss of $1.096 million over a 12-year period
- This approach is highly dependent on federal subsidies for broadband infrastructure development.
- This approach would also require a 30% take rate, which means wherever we build, we would need at least 30% of the customers to sign on with us or to switch from their current provider.
- Requires us to secure $4.1 million in grant funding in the first year and another $4 million in the second year.

Deployment Costs

Griffin School District Area

- Average cost per home passed would be $2,011
- Cost to the PUD with 30% take rate would be $10,220 per home

Maytown/Scott Lake Area

- Total cost to deploy $1,000,000 for initial buildout and towers
- $2,100 a month rent for wireless towers
- $500,000 pole attachment cost
- $300,000 installation and engineering
- $180,000 CBRS Radios
- Total cost of $1.98 million

12-Year Cash Flow Model

The cost of deploying services, even if it is highly subsidized with moderate customer take-rates, is unlikely to be financially sustainable for the organization.

Cash Flow Model

	Yr 0	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Yr 12
Revenues													
Residential Recurring									$ 771,203	$ 802,773	$ 834,343	$ 865,912	$ 897,482
Residential NRC		-	$ -	$ -	$ -				$ 13,423	$ 13,423	$ 13,423	$ 13,423	$ 13,423
Wireless Recurring		21,925	$ 24,118	$ 26,530	$ 29,183				$ 142,355	$ 142,355	$ 142,355	$ 142,355	$ 142,355
Wireless NRC									$ -	$ -	$ -	$ -	$ -
Business Class Recurring		50,187	$ 52,696	$ 55,331	$ 58,097				$ 23,969	$ 25,059	$ 26,148	$ 27,238	$ 28,328
Business Class NRC									$ 329	$ 329	$ 329	$ 329	$ 329
High Cap Services Recurring		86,608	$ 86,608	$ 86,608	$ 86,608				$ 5,400	$ 5,400	$ 5,400	$ 5,400	$ 5,400
High Cap Services NRC									$ -	$ -	$ -	$ -	$ -
3rd Party Network Recurring		**158,720**	**$ 163,422**	**$ 168,468**	**$ 173,888**				$ -	$ -	$ -	$ -	$ -
4th Party Network NRC									$ -	$ -	$ -	$ -	$ -
		1,022,533	**$ 1,053,150**	**$ 1,084,888**	**$ 1,117,800**								
Capital Proceeds									$ -	$ -	$ -	$ -	$ -
Total Revenues		***(33,196)***	***$ (31,152)***	***$ (30,231)***	***$ (30,484)***				**$ 956,678**	**$ 989,338**	**$ 1,021,997**	**$ 1,054,657**	**$ 1,087,316**
Operating and Maintenance Expens													
Network Operations Expenses									$ 466,607	$ 480,606	$ 495,024	$ 509,875	$ 525,171
Sales and Marketing Expenses									$ 361,968	$ 372,827	$ 384,012	$ 395,532	$ 407,398
Business Administration Expenses									$ 10,079	$ 10,381	$ 10,692	$ 11,013	$ 11,343
3rd Party Network Expenses Recurring									$ -	$ -	$ -	$ -	$ -
3rd Party Network Expenses NRC									$ -	$ -	$ -	$ -	$ -
O&M Total									**$ 838,654**	**$ 863,814**	**$ 889,728**	**$ 916,420**	**$ 943,912**
Capital Expenditures													
Minimum Viable Product	$ 93,760	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Wireless Service Zones	$ 983,750	$ 1,011,204	$ 27,454	$ 27,454	$ 27,454	$ 27,454							
PON Service Zones 1 through 3	$ 52,570	$ 52,570	$ 52,570	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -
Service Zones 1 through 3	$ 3,011,937	$ 3,011,937	$ 3,011,937	$ 3,011,937	$ -	$ -	$ -	$ -	$ -	$			
Renewal and Replacement / Equipment	$ -	$ -	$ 11,251	$ 12,376	$ 13,614	$ 14,975	$ 16,473	$ 18,120	$ 19,932	$ 21,925	$ 24,118	$ 26,530	$ 29,183
Infrastructure Repair / Outside Plant	$ -	$ -	$ 35,667	$ 37,450	$ 39,323	$ 41,289	$ 43,353	$ 45,521	$ 47,797	$ 50,187	$ 52,696	$ 55,331	$ 58,097
Debt Services	$ -	$ 86,608	$ 86,608	$ 86,608	$ 86,608	$ 86,608	$ 86,608	$ 86,608	$ 86,608	$ 86,608	$ 86,608	$ 86,608	$ 86,608
Total Capital	**$ 4,142,017**	**$ 4,162,319**	**$ 3,225,487**	**$ 3,175,825**	**$ 166,998**	**$ 170,326**	**$ 146,434**	**$ 150,249**	**$ 154,337**	**$ 158,720**	**$ 163,422**	**$ 168,468**	**$ 173,888**
Total O&M and Capital	**$ 4,142,017**	**$ 4,582,606**	**$ 3,742,096**	**$ 3,804,564**	**$ 869,266**	**$ 946,515**	**$ 936,945**	**$ 964,476**	**$ 992,991**	**$ 1,022,533**	**$ 1,053,150**	**$ 1,084,888**	**$ 1,117,800**
Net Cash	***$ -***	***$ (268,104)***	***$ (243,435)***	***$ (184,663)***	***$ (121,347)***	***$ (30,686)***	***$ (45,586)***	***$ (40,457)***	***$ (36,312)***	***$ (33,196)***	***$ (31,152)***	***$ (30,231)***	***$ (30,484)***

12 Year Cash Flow Total **$ (1,095,654)**

12 Year Cash Flow Total **$ (1,095,654)**

General Manager's Recommendations

- **County-wide services has a strong presence and services will be expanded in the next year.**
  - Urban areas have high-speed broadband available but are unsatisfied with the cost.
  - Rural and metro areas are targeted by entities looking to provide broadband access. The landscape of these efforts will significantly improve broadband availability in rural areas.
  - Scott Lake & May Town: 1 major ISP present, 1 local ISP present, 1 major ISP has pre-engineered
  - Griffin School District: 1 major ISP present, 1 possible local ISP pre-engineered
- **Rural communities required significant financial investment that poses a cost barrier the PUD may not be able to overcome.**

Benefits of this Assessment

- Visibility throughout Thurston County
  - Residents of Thurston County
  - CERB
- Strengthened relationships
  - Nisqually Tribe
  - Chambers of Commerce
  - EDC
  - TRPC
  - Port of Olympia
- Created new relationships
  - School Districts
  - Internet Service Providers
  - Fire Departments
  - Libraries
  - Economic Development of Nisqually Tribe

Next Steps

- Withdraw from the Thurston Broadband Action Team (BAT)
- Follow up with Certificates of Appreciation to participating stakeholders
- Do not pursue broadband again for the foreseeable future

Questions?

Thank you for your time.