

Memo

To: BOCC
From: Jeff Bockes, IT Manager
CC: BOCC's, Connie Hunt
Date: 12/13/17
Re: Region 10 Broadband proposal & budgeting for 2018

Evolution of Region 10's proposal

At a BOCC work session on Oct. 31, 2017, Region 10 staff updated the board with their latest plans for connecting Ouray County to the Region 10 broadband network.

Since then, county staff has met with City of Ouray and Town of Ridgway staff (Nov. 14), presented Region 10 with some additional questions for clarification, and met again at a joint meeting of Region 10 staff and City & Town staff (Dec. 7) to further discuss Region 10's plans.

Region 10's Lit Services proposal

Region 10 has negotiated a 'lit services' agreement with Mammoth Networks (www.mammothnetworks.com), to guarantee two dedicated 10 Gbps (gigabit/second) fiber connections into Ouray county: 10 Gbps will be available at a CNL (carrier neutral location) in Ridgway, and 10 Gbps at a CNL in Ouray.

Mammoth provides a 'middle-mile' or 'back-haul' connection between Region 10 network operations in Montrose and the Ouray/Ridgway CNL's. Region 10 would manage their own network over these connections.

Mammoth leases bandwidth on fiber from Century Link. The fiber is physically located along with all the other fiber between Montrose and Ouray, so it is not a redundant path.

Region 10 estimates that the two 10 Gbps services will offer a reasonable amount of bandwidth to allow potential ISP's (internet service providers) to enter into agreements with Region 10 to purchase transport and internet access, which can then be re-sold to customers. Where last-mile connections don't already exist from the CNL to an end user, ISP's would be responsible for establishing wireless networks, fiber networks, etc., to reach customers.

Region 10 estimates the lit services will be available within 90 days, and as soon as CNL's are established, Region 10's network can be extended to Ouray County.

Region 10 staff has stated that utilizing the lit services proposal will connect Ouray County to the Region 10 network in the short term, and allow additional time to pursue other options for a long-term solution, including pursuing dark fiber, new fiber builds, or other solutions.

Region 10 staff states that: "The incentive to capitalizing the first three years of lit services is to eliminate that cost from monthly operational expenses, which will lower access costs in our smaller communities."

Proposed lit services costs

The lit services agreement Region 10 has negotiated with Mammoth is for a term of 3 years (36 months), at \$2,700/month for each 10 Gbps connection, or:

$$\$2,700 \times (2) \text{ locations} \times (36) \text{ months} = \$194,400 \text{ for the 3 year term.}$$

Region 10 is working with DOLA to approve the use of broadband grant funds to capitalize the 3 year lit services payment up front, which would allow the use of DOLA grant match funds to cover 50% of the total cost. If DOLA approves the proposal, the total 50% match would be:

$$\$194,400 \times 50\% = \$97,200.$$

An even 3-way split (Ouray County, City of Ouray, and Town of Ridgway) of the DOLA match amount would be:

$$\$97,200 / 3 = \$32,400 \text{ for each entity.}$$

CNL's - Carrier Neutral Locations

A CNL is required as a fixed point of connection to the proposed network. Private ISP's would be able to co-locate equipment at these sites, connect to the Region 10 network, and extend their private networks outward from the CNL.

Region 10 and their contractor Deeply Digital presented estimates for completion of the CNL's in Ridgway and Ouray.

Ridgway's CNL, located in the Public Works yard, will require the construction of a new structure, and is projected to cost \$69,598, plus \$22,000 for network equipment:

$$\$69,598 + \$22,000 = \$91,598$$

Ouray's CNL, located in the basement of City Hall, has a projected cost of \$45,688, plus \$22,000 for network equipment:

$$\$45,688 + \$22,000 = \$67,688$$

DOLA grant funds would provide 50% of the cost for CNL's:

$$\text{Ridgway: } \$91,598 \times 50\% = \$45,799 \text{ match}$$

$$\text{Ouray: } \$67,688 \times 50\% = \$33,844 \text{ match}$$

It was discussed at the last meeting that Ouray County would contribute ½ the total cost of each CNL, and Ridgway and Ouray would contribute the other ½ for each site.

Ouray County's ½ of each CNL (after DOLA's 50%):

$$\text{Ridgway: } \$45,799 \times \frac{1}{2} = \$22,900$$

$$\text{Ouray: } \$33,844 \times \frac{1}{2} = \$16,922$$

Total Ouray County CNL's:

$$(\text{Ridgway}) \$22,900 + (\text{Ouray}) \$16,922 = \$39,822$$

County's estimated expenses in 2018 for Region 10's proposal (after DOLA 50% match)

County's share of the 3-year lit services proposal:	\$32,400
County's share of 2 CNL's construction & equipment:	\$39,822
Estimated project & construction management:	<u>\$10,000</u> (?)
	\$81,222