

**PUBLIC UTILITY DISTRICT NO. 1 OF CHELAN COUNTY
327 N. WENATCHEE AVENUE
WENATCHEE, WA 98801**

REGULAR COMMISSION MEETING

November 20, 2017

AGENDA

STUDY SESSION

10:00 A.M.

1. Pledge of Allegiance and Safety Minute – Micah Lenderman
2. Approval of the Agenda - Any item on the Regular Agenda shall be subject to transfer to the Consent Agenda upon request of any Commission member
3. Advanced Metering Infrastructure (AMI) and Related Customer Utility Technology Projects Update
4. Powerhouse 2 Rehabilitation
5. Debt Planning: The Next Level of Detail
6. Conservation Potential Assessment
7. LED Streetlight Rate Update
8. Public Power Benefit

BUSINESS SESSION

1:00 P.M.

9. PUBLIC HEARING - 2018 Budget Update

REGULAR COMMISSION MEETING AGENDA

November 20, 2017

Page 2

Consent Agenda

10. Minutes:

November 6, 2017 Regular Meeting, November 7, 2017 Tri-Commission Meeting, and November 13, 2017 Mid-C Commissioners/Managers Meeting

11. Vouchers:

Accounts Payable Summary Report dated November 15, 2017:

- a) Vouchers totaling \$5,732,243.21
- b) Approval of Customer Deposit Returns and Conservation Incentive payments for the period November 1, 2017 through November 14, 2017 in the amount of \$30,183.75
- c) Approval of the net Payrolls, Warrant Nos. 235615 through 235640 and Advice Nos. 642882 through 643632 for the pay period ending 10/29/2017 in the amount of \$1,827,871.54; and
- d) Approval of Warrant Nos. 23884 through 23899 totaling \$17,394.28 for claim payments from the workers' compensation self-insurance fund for the period ending November 13, 2017.

Regular Agenda

12. A RESOLUTION AUTHORIZING THE GENERAL MANAGER TO ENTER INTO A SERVICES AGREEMENT (SA NO. 17-100) WITH UNIVERSAL PROTECTION SERVICE LP DBA ALLIED UNIVERSAL SECURITY SERVICES OF SANTA ANA, CA FOR DISTRICT UNARMED SECURITY SERVICES
13. A RESOLUTION REJECTING THE BID OF MID COLUMBIA FORKLIFT, INC. (BID A) AND PAPE MATERIAL HANDLING AND ACCEPTING THE BID OF MID COLUMBIA FORKLIFT, INC. OF EAST WENATCHEE, WA (BID B) (BID 17-22) FOR THE SUPPLY OF ROUGH TERRAIN FORKLIFT
14. A RESOLUTION AUTHORIZING THE GENERAL MANAGER TO ENTER INTO A TASK AUTHORIZATION SERVICES AGREEMENT (SA NO. 17-173) WITH STANTEC CONSULTING SERVICES, INC. OF BELLEVUE, WA FOR PROFESSIONAL ENGINEERING SERVICES RELATED TO ROCK ISLAND PROJECTS
15. A RESOLUTION AUTHORIZING THE GENERAL MANAGER TO ENTER INTO A SERVICES AGREEMENT (SA NO. 17-183) WITH CONFLUENCE HEALTH OF WENATCHEE, WA FOR DISTRICT MEDICAL SERVICES
16. A RESOLUTION AUTHORIZING AMENDMENT NO. 7 TO SERVICES AGREEMENT (SA-TA NO. 15-133) WITH ASPECT CONSULTING LLC TO PROVIDE TECHNICAL

REGULAR COMMISSION MEETING AGENDA

November 20, 2017

Page 3

ASSISTANCE REGARDING THE DISTRICT'S WATER RIGHTS AND WATER RESOURCES PROGRAM

17. A RESOLUTION AUTHORIZING AMENDMENT NO. 2 TO SERVICES AGREEMENT (SA NO. 14-196) WITH GRAY AND OSBORNE INC. TO PROVIDE ENGINEERING CONSTRUCTION SUPPORT SERVICES FOR ROCK ISLAND DAM POWERHOUSE NO. 1 WATER SYSTEM
18. A RESOLUTION RESCINDING AND REPLACING RESOLUTION NO. 17-14114; ADOPTING NEW TELECOMMUNICATION RATES FOR WHOLESALE TELECOMMUNICATIONS SERVICES BY SERVICE PROVIDERS ON THE DISTRICT'S BROADBAND SYSTEM
19. Manager Items
20. Commission Items
21. Follow-up on Delegation of Action Items from Previous Board Meeting
22. Delegation of Action Items
23. Additional Public Comment*
24. Matters of general business as may necessarily come before the Commission
25. Executive Session: To discuss with legal counsel agency enforcement actions, litigation, potential litigation to which the District or its board is, or is likely to become, a party, and/or legal risks, as authorized by RCW 42.30.110(1)(i).

* Members of the public are encouraged to ask specific questions after each item presented. This agenda item is for additional comments/questions related to matters not on the agenda.

This agenda and resolutions (if any) may be revised by the Commission as appropriate.

RESOLUTION NO. _____

A RESOLUTION AUTHORIZING THE GENERAL MANAGER TO ENTER INTO A SERVICES AGREEMENT (SA NO. 17-100) WITH UNIVERSAL PROTECTION SERVICE LP DBA ALLIED UNIVERSAL SECURITY SERVICES OF SANTA ANA, CA FOR DISTRICT UNARMED SECURITY SERVICES

FACTUAL BACKGROUND AND REASONS FOR ACTION

The District has previously obtained uniformed security services by Request for Proposals (RFPs). The uniformed security services include protecting District assets, providing access control, conducting public patrol incidents and alarm response, and monitoring of critical infrastructure through video surveillance. The District's existing contract for uniformed security services expires at the end of 2017.

District staff issued RFP 17-44, as approved under Resolution 17-14149, on October 10, 2017. Responses were opened November 1, 2017. The evaluation team reviewed and scored the proposals provided and found Universal Protection Service LP dba Allied Universal Security Services of Santa Ana, CA ("Allied") to be the most qualified.

Resolution No. 08-13325 requires that the Commission, by resolution, authorize Service Agreements that exceed \$200,000.

Allied has prepared a proposal to perform Unarmed Security Services for an estimated cost of \$5,000,000 over five (5) years. The proposal has been negotiated pursuant to RCW 39.04.270 and Resolution No. 08-13325.

District staff has determined that Allied is the best qualified firm to provide the required services and that the cost for five (5) years of said services of \$5,000,000 is a fair and reasonable price.

It is District staff's recommendation that it is in the best interest of the District to enter into a Services Agreement with Allied for the above-described services.

The General Manager of the District has reviewed staff's recommendation and concurs in the same.

ACTION

IT IS RESOLVED BY THE COMMISSION OF PUBLIC UTILITY DISTRICT NO. 1 OF CHELAN COUNTY, as follows:

Section 1. The General Manager of the District is hereby authorized to enter into a Services Agreement with Allied for Unarmed Security Services in an amount not to exceed \$5,000,000 through December 31, 2022 without prior Commission approval. A copy of the Agreement is on file in the offices of the District.

DATED this 20TH day of NOVEMBER 2017.

President

ATTEST:

Vice President

Secretary

Commissioner

Commissioner

S E A L

RESOLUTION NO. _____

A RESOLUTION REJECTING THE BID OF MID COLUMBIA FORKLIFT, INC. (BID A) AND PAPE MATERIAL HANDLING AND ACCEPTING THE BID OF MID COLUMBIA FORKLIFT, INC. OF EAST WENATCHEE, WA (BID B) (BID 17-22) FOR THE SUPPLY OF ROUGH TERRAIN FORKLIFT

FACTUAL BACKGROUND AND REASONS FOR ACTION

On October 3, 2017, an invitation for sealed bids was published in accordance with RCW 54.04.070 and Resolution No. 08-13325 to supply a Rough Terrain Forklift. Bid proposals were opened on October 24, 2017, at 2:30 p.m. in the offices of the District. Three bids were received (excluding sales tax) as tabulated on Exhibit A attached.

The bid by Mid Columbia Forklift, Inc. (Bid A) did not meet the minimum requirements specified in the contract documents. The unit proposed did not meet the specifications provided by the District, most significantly the requirement of a Tier 4 diesel engine. This bid should be rejected as non-responsive.

The bid by Pape Material Handling did not meet the minimum requirements specified in the contract documents. The bidder failed to provide the required Bid Bond or Cashier's Check. This bid should be rejected as non-responsive.

District staff has determined that the bid of Mid Columbia Forklift, Inc. (Bid B) of East Wenatchee, WA, in the amount of \$95,200 (excluding sales tax) is the lowest responsive and best bid in compliance with the plans and specifications for Bid No. 17-22. This bid meets all statutory requirements. Resolution No. 08-13325 requires that the rejection of the apparent low dollar bidder must come before the Commission for action.

District staff recommends awarding Bid No. 17-22 to Mid Columbia Forklift, Inc.

The General Manager of the District concurs with District staff's recommendation.

ACTION

IT IS RESOLVED BY THE COMMISSION OF PUBLIC UTILITY DISTRICT NO. 1 OF CHELAN COUNTY, WASHINGTON, as follows:

Section 1. The bid submitted by Mid Columbia Forklift, Inc. (Bid A) of East Wenatchee, WA, did not meet the minimum requirements specified in the contract documents and is hereby rejected.

Section 2. The bid submitted by Pape Material Handling of East Wenatchee, WA, did not meet the minimum requirements specified in the contract documents and is hereby rejected.

Section 3. The bid submitted by Mid Columbia Forklift, Inc. (Bid B) of East Wenatchee, WA, is the lowest responsible and best bid in compliance with the plans and specifications to provide the Rough Terrain Forklift. The General Manager of the District is hereby authorized to enter into a contract with Mid Columbia Forklift, Inc. in the amount of \$95,200, excluding sales tax. A copy of the contract will be on file in the offices of the District

Dated this 20th day of November 2017.

ATTEST:

President

Vice President

Secretary

Commissioner

Commissioner

S E A L



Bid Tabulation

Bid No. 17-22

Supply of Rough Terrain Forklift

Bidder Name City, State	Bid Bond/ Cashier's Check	Bid Amount
Mid-Columbia Forklift, Inc East Wenatchee, WA Bid A (LiftKing Model LK10M42)	X	\$79,445.00
Pape Material Handling Wenatchee, WA	None	\$89,958.00
Mid-Columbia Forklift, Inc East Wenatchee, WA Bid B (Sellick Model S100-Je-4)	X	\$95,200.00

RESOLUTION NO. _____

A RESOLUTION AUTHORIZING THE GENERAL MANAGER TO ENTER INTO A TASK AUTHORIZATION SERVICES AGREEMENT (SA NO. 17-173) WITH STANTEC CONSULTING SERVICES, INC. OF BELLEVUE, WA FOR PROFESSIONAL ENGINEERING SERVICES RELATED TO ROCK ISLAND PROJECTS

FACTUAL BACKGROUND AND REASONS FOR ACTION

The District is currently engaged in several large projects at Rock Island. This includes, but is not limited to, rehabilitation of Powerhouse 1 Units B1-B4 and B5-B10. The District is also starting several new large projects at Rock Island including the rehabilitation of Rock Island Powerhouse 2 Units U1-U8, Powerhouse 2 Balance of Plant modernization, and assessment of spillway mechanical equipment. Resolution No. 08-13325 requires that the Commission, by resolution, authorize Service Agreements that exceed \$200,000.

Stantec Consulting Services, Inc. (“Stantec”) of Bellevue, WA has prepared a proposal to perform professional engineering services for projects at Rock Island.

District staff has determined that Stantec is the best qualified firm to provide the required services and that the costs proposed for the services is a fair and reasonable price. The total costs for the services to be provided by Stantec shall not exceed \$5,250,000 from the period of December 1, 2017 to November 30, 2022.

It is District staff's recommendation that it is in the best interest of the District to enter into a Services Agreement with Stantec for the above-described services. Services shall be provided when and as requested by the District, according to written task orders which define the scope, budget and schedule for individual tasks. No work shall be undertaken by Stantec without a written task order.

The General Manager of the District has reviewed staff's recommendation and concurs in the same.

ACTION

IT IS RESOLVED BY THE COMMISSION OF PUBLIC UTILITY DISTRICT NO. 1 OF CHELAN COUNTY, as follows:

Section 1. The General Manager of the District is hereby authorized to enter into a Services Agreement with STANTEC CONSULTING SERVICES, INC. for professional engineering services for projects at Rock Island in an amount not to exceed

\$5,250,000 without prior Commission approval. A copy of the Agreement is on file in the offices of the District.

DATED this 20th day of November 2017.

President

ATTEST:

Vice President

Secretary

Commissioner

Commissioner

S E A L

RESOLUTION NO. _____

A RESOLUTION AUTHORIZING THE GENERAL MANAGER TO ENTER INTO A SERVICES AGREEMENT (SA NO. 17-183) WITH CONFLUENCE HEALTH OF WENATCHEE, WA FOR DISTRICT MEDICAL SERVICES

FACTUAL BACKGROUND AND REASONS FOR ACTION

The District must have pre-arranged medical services for employees for wellness and protection, as well as compliance driven medical surveillance dictated by state and federal regulations. Resolution No. 08-13325 requires that the Commission, by resolution, authorize Service Agreements that exceed \$200,000.

Confluence Health of Wenatchee, WA has prepared a proposal to perform District Medical Services for three years at an estimated cost of \$400,000.

District staff has determined that Confluence Health is the best qualified firm to provide the required services and that the cost for three years for said services of \$400,000 is a fair and reasonable price.

It is District staff's recommendation that it is in the best interest of the District to enter into a Services Agreement with Confluence Health for the above-described services.

The General Manager of the District has reviewed staff's recommendation and concurs in the same.

ACTION

IT IS RESOLVED BY THE COMMISSION OF PUBLIC UTILITY DISTRICT NO. 1 OF CHELAN COUNTY, as follows:

Section 1. The General Manager of the District is hereby authorized to enter into a Services Agreement with Confluence Health for District Medical Services in an amount not to exceed \$400,000 through December 31, 2020 without prior Commission approval. A copy of the Agreement is on file in the offices of the District.

DATED this 20TH day of NOVEMBER 2017.

President

ATTEST:

Vice President

Secretary

Commissioner

Commissioner

S E A L

RESOLUTION NO. _____

A RESOLUTION AUTHORIZING AMENDMENT NO. 7
TO SERVICES AGREEMENT (SA-TA NO. 15-133)
WITH ASPECT CONSULTING LLC TO PROVIDE
TECHNICAL ASSISTANCE REGARDING THE
DISTRICT'S WATER RIGHTS AND WATER
RESOURCES PROGRAM

FACTUAL BACKGROUND AND REASONS FOR ACTION

The District entered into a Services Agreement (SA-TA No. 15-133) on August 27, 2015 with Aspect Consulting LLC to provide technical assistance related to water right transfers, permitting, compliance, and relinquishment avoidance strategies associated with the District's portfolio of water rights, in an amount not to exceed \$195,000.

Resolutions No. 16-14026 and 16-14102 increased the contract price by a total of \$310,000 for a revised contract price not to exceed \$505,000.

Through the review of the District's water rights and Water Resources Program, staff has identified additional work that is needed. Resolution No. 08-13325 requires that the Commission, by resolution, authorize Amendments to Service Agreements when the Amendment increases the total contract price to over \$200,000.

District staff recommends that it is in the best interest of the District to amend Services Agreement No. 15-133 with Aspect Consulting LLC to provide technical services regarding the District's water rights in the amount of \$300,000, for a total revised contract price not to exceed \$805,000.

The General Manager has reviewed District staff's recommendation and concurs in the same.

ACTION

IT IS RESOLVED BY THE COMMISSION OF PUBLIC UTILITY DISTRICT NO. 1 OF CHELAN COUNTY, WASHINGTON as follows:

Section 1. The General Manager is hereby authorized to execute an Amendment to Services Agreement (SA-TA No. 15-133) with Aspect Consulting LLC to provide the

additional services identified above. The revised contract price will not exceed \$805,000 without prior Commission approval. A copy of the Amendment is on file in the offices of the District.

DATED this **20th** day of **November 2017**.

ATTEST:

Vice President

Commissioner

President

Secretary

Commissioner

S E A L

RESOLUTION NO. _____

A RESOLUTION AUTHORIZING AMENDMENT
 NO. 2 TO SERVICES AGREEMENT (SA NO. 14-196)
 WITH GRAY AND OSBORNE INC. TO PROVIDE
 ENGINEERING CONSTRUCTION SUPPORT
 SERVICES FOR ROCK ISLAND DAM
 POWERHOUSE NO. 1 WATER SYSTEM

FACTUAL BACKGROUND AND REASONS FOR ACTION

The District entered into a Services Agreement (SA-TA No. 14-196) on November 14, 2015 with Gray and Osborne Inc. to provide Rock Island Dam Powerhouse No. 1 Water Engineering, in an amount not to exceed \$195,000. The Service Agreement was amended on October 12, 2017, and the not to exceed amount was increased to \$199,999.

District staff has identified the need for additional services for SA-TA 14-196 to include construction support for the reservoir construction and underground pipe. It will also include finalizing bid documents and other construction support. Resolution No. 08-13325 requires that the Commission, by resolution, authorize Amendments to Service Agreements when the Amendment increases the total contract price to over \$200,000.

District staff recommends that it is in the best interest of the District to amend Services Agreement No. 14-196 with Gray and Osborne Inc. to increase the not-to-exceed amount by \$40,000, for a total revised not to exceed price of \$240,000.

The General Manager has reviewed District staff's recommendation and concurs in the same.

ACTION

IT IS RESOLVED BY THE COMMISSION OF PUBLIC UTILITY
 DISTRICT NO. 1 OF CHELAN COUNTY, WASHINGTON as follows:

Section 1. The General Manager is hereby authorized to execute an Amendment to Services Agreement (SA-TA No. 14-196) with Gray and Osborne Inc. to provide the additional services identified above. The revised contract price will not exceed \$240,000 without prior Commission approval. A copy of the Amendment is

on file in the offices of the District.

DATED this 20th day of November 2017.

President

ATTEST:

Vice President

Secretary

Commissioner

Commissioner

S E A L

RESOLUTION NO. _____

A RESOLUTION RESCINDING AND REPLACING RESOLUTION NO. 17-14114; ADOPTING NEW TELECOMMUNICATION RATES FOR WHOLESALE TELECOMMUNICATIONS SERVICES BY SERVICE PROVIDERS ON THE DISTRICT'S BROADBAND SYSTEM.

FACTUAL BACKGROUND AND REASONS FOR ACTION

Pursuant to RCW 54.16.330 and RCW 54.16.005, the District has constructed, and may cause to be constructed from time to time, a Broadband System through which the District is authorized to provide wholesale telecommunications services and facilities ("hereinafter Telecommunications Services") to entities authorized to provide telecommunications services to the general public and internet service providers at reasonable and nondiscriminatory rates.

The District must comply with the laws of the State of Washington, RCW 54.24.080, sound utility principles and the covenants of the District's Bond resolutions in establishing rates. The District is required to establish, maintain and collect rates which are fair, nondiscriminatory and adequate to provide revenues sufficient for the payment of the principal and interest on such revenue obligations for which payment has not otherwise been provided and all payments which the District is obligated to set aside in any special fund or funds created for such purpose. The District must also collect revenues for the proper operation and maintenance of the public utility and all necessary repairs, replacements and renewals.

In determining non-preferential and nondiscriminatory rates, terms and conditions, RCW 54.16.340 allows the District to consider such matters such as service quality, cost of service, technical feasibility of connection points on the District's system, time of response to service requests, system capacity, and other matters reasonably related to the provision of wholesale telecommunications services.

RCW 54.16.330 requires the District to account for any and all revenues and expenditures related to its wholesale telecommunications facilities and services separately from revenues and expenditures related to its internal telecommunications operations.

The District previously adopted rates for Telecommunications Services, pursuant to Resolution No. 17-14114.

From time to time, District staff reviews telecommunications services offered, actual usage and costs of the services, along with rate analysis to review market conditions Staff is recommending amending the Telecommunications Rates to accommodate service provider and end user needs that have been expressed to the District by creating a Business DLL service with enhanced functionality and to add language clarity to existing services. Based on that action, staff recommends the following changes to the Telecommunications Rates:

- Addition of a Business Data Local Loop Service (DLL): Addition of technical specifications for both Residential and Business Data Local Loop services
- Clarification of language in Rate Schedule 100
 - Symmetrical and Asymmetrical DLL offerings
 - Application of optional IP Multicast and VOIP services
- Clarification of language in Rate Schedule 500
 - Application of miscellaneous Telephony and RF Video Transport services

As set forth in Exhibit A, Telecommunications Rates, attached hereto and incorporated herein by this reference.

Based upon District staff's evaluation and analyses of the proposed changes to the Wholesale Telecommunications Rates, District staff recommends and the General Manager concurs, that the Wholesale Telecommunication Rates be adopted as set forth in this resolution at Exhibit A, attached hereto and incorporated herein by this reference, to be effective January 1, 2018.

The adoption of this rate resolution is not a major action under the State Environmental Policy Act, and as such is categorically exempt under SEPA guidelines, WAC Ch. 197-11-800(15)(i).

ACTION

IT IS RESOLVED BY THE COMMISSION OF PUBLIC UTILITY DISTRICT NO. 1 OF CHELAN COUNTY, WASHINGTON, as follows:

Section 1. Resolution No. 17-14114 is hereby rescinded and replaced, effective as of 24:00 hours on December 31, 2017.

Section 2. The Commission hereby adopts those Telecommunications Services categories, rates and conditions for service, as set forth in Exhibit A attached, entitled *Wholesale Telecommunication Services Rates*, pursuant to RCW 54.16.330 effective as of 24:00 hours Pacific Time on December 31, 2017.

DATED this 20th day of November 2017.

President

ATTEST:

Vice President

Secretary

Commissioner

Commissioner

S E A L

1. General Conditions of Service: All Wholesale Telecommunications Services shall be subject to Availability. In addition, all of the following conditions shall be met for District provision of all Telecommunication Services referenced.

- A. Service Providers shall enter into a Telecommunications Access and Transport Services License Agreement (“Agreement”), in the form(s) approved by the District, make timely deposit and payment, as set forth in the Agreements, in order to avoid termination of service.
- B. Service Providers will be charged on a monthly basis according to the rates set in this document. Any additional charges that are incurred for special equipment, provisioning, or charges from other carriers will be passed on to and be the responsibility of the Service Provider.
- C. Unless otherwise specified, charges include the Network Termination Equipment (NTE) device at the District’s specified demarcation point. The Service Provider must supply, at its own cost, any additional equipment required to deliver services.
- D. Service Providers shall submit service requests to the District through the District’s approved and designated submission process. Upon approval of the request form and in compliance with District regulations, the service request will be completed at such time designated by the District.
- E. Service Providers will be charged Non-Recurring Charges (NRC) and other fees as set forth in the Wholesale Telecommunications Services Rates policy and the Wholesale Telecommunications Services Fees & Charges policy.
- F. Any request for special services outside of this document, Telecommunications Rates, shall be on an Individual Case Basis (ICB). All charges and fees incurred and corresponding rates will be determined at the time of request.

2. Definitions – Unless the context clearly indicates otherwise, the following definitions shall apply to this document, Telecommunications Rates.

24/7: An acronym to describe availability. The “24” relates to the number of hours in a day. The “7” relates to the number of days in a week.

95th Percentile: The pricing for Burstable Rate billing is based upon sustained bandwidth usage, which is determined on a monthly basis. The methodology for measuring sustained usage is as follows: The Network Terminating Equipment (NTE) is polled every 5 minutes for total bits ingress and total bits egress (on VLAN service polling only occurs on the ingress interface). The data is divided by 300 (the number of seconds in a 5-minute interval). This gives two averages (ingress, egress) for the 5-minute period. The averages become data points (a total of 17,280 in a 30-day month) which are tracked over the course of

the customer's monthly billing cycle all 17,280 data points are then ranked in ascending order the top 5% of the data points (864 measurements in a 30 day month) are disregarded and the customer is billed at the 95% level of usage. In the case of VLAN service as noted above only the INGRESS interface is polled therefore reducing the corresponding measurements by half. The usage on the ingress port is then applied for billing at the 95th percentile.

Asymmetrical: The term asymmetric (also asymmetrical or non-symmetrical) refers to any system, in which the data speed or quantity differs in one direction as compared with the other direction, averaged over time. Asymmetrical data flow can, in some instances, make more efficient use of the available infrastructure than symmetrical data flow, in which the speed or quantity of data is the same in both directions, averaged over time.

Availability: May be defined for all Telecommunication Services through standards reasonably determined by District staff or policies established by the District Board of Commissioners.

Backhaul: In a hierarchical telecommunications network the backhaul portion of the network comprises the intermediate links between the core network, distribution segments, and access endpoints typically aggregating telecommunications services or signals for the purpose of efficiently providing communication with network and Service Provider resources and products.

Bandwidth: The amount of data that can be passed along a communications channel in a given period of time. For analog devices, such as standard telephones, bandwidth is the range of frequencies that can be transmitted and is expressed in hertz (cycles per second). For digital devices, bandwidth is measured in bits per second. The wider the bandwidth, the faster data can be sent.

Baseband: A transmission medium through which digital signals are sent without frequency shifting. In general, only one communication channel is available at any given time.

Bit: Bit is a contraction of the term BInary digiT. It is the smallest unit of information (data) a computer can process, representing either high or low, yes or no, or 1 or 0. It is the basic unit in data communications. A bit can have a value of zero (a space) or one (a mark).

Broadband: A transmission method pertaining to or denoting a type of high-speed data transmission in which the bandwidth is shared by more than one simultaneous signal.

Burstable Rate: Burst is a term used in a number of information technology contexts to mean a specific amount of data sent or received in one intermittent operation. It can be contrasted with *streamed, paced, or continuous*. Generally, a burst operation implies that some threshold has been reached that triggers the burst. Depending on the particular technology, a burst operation can be intermittent at a regular or an irregular rate.

CIR-Committed Information Rate: An acronym which specifies the amount of guaranteed bandwidth (measured in bits per second) on a transmission service. Typically, when

acquiring a network service, a network provider may specify the CIR level that is less than or equal to the port speed of the circuit and/or service. The network provider may provide Service Level Assurances in which conforming data not exceeding the CIR level will be delivered through the provider's network circuit only and does not provide assurance beyond the service's Network Terminating Equipment (NTE). The presence of a CIR on a service does not eliminate data traffic exceeding the CIR. Data traffic exceeding the CIR may be transmitted upon the medium, however that traffic exceeding the CIR is queued and placed upon the medium and is subject to discard should the circuit or service exceed the CIR threshold and experience network congestion.

Coarse Wave Division Multiplex (CWDM): Coarse wavelength-division multiplexing (WDM) is a technology which multiplexes a number of optical carrier signals onto a single optical fiber by using different wavelengths (i.e., colors) of laser light defined under ITU ITU-T G.694.2.

Colocation: In general, co-location is moving or placing things together, sometimes implying a proper order. This term (often spelled "colocation") is used to mean the provision of space for a customer's telecommunications equipment on the service provider's premises. For example, a Web site owner could place the site's own computer servers on the premises of the Internet service provider (ISP). Or an ISP could place its network routers on the premises of the company offering switching services with other ISPs. The alternative to co-location is to have the equipment and the demarcation point located at the customer's premises. The District offers co-location on a wholesale basis to Service Providers.

Critical Dark Fiber Pathway. A Critical Path Dark Fiber Pathway is formally defined by the associated Critical Path Dark Fiber Service Level Agreement (SLA) contained within the Telecommunications Facilities License Agreement. The SLA defines a response and restoration time along with credits should the SLA not be met.

DLL-Data Local Loop: Term used to describe the connection between the Service Provider's End-users and a central aggregation point on a network often termed a Central Office. *See Also: Local Loop*

DS-1 (T-1) Business Transport Services: Delivers a DS-1 (T-1) standard 1.544 Mbps in support of 24 voice or data connections each encoded at 64Kbps.

End-user: A customer of a Service Provider receiving telecommunications services over the District's telecommunications network. Each customer billed by the Service Provider is considered a separate End-user. For example, a Duplex with each unit-owner or tenant billed separately by the Service Provider is considered two End-users.

Ethernet: Layer 2 networking technology widely used as the connection mechanism for local area networking. Originally introduced in 1980, Ethernet has become the defacto standard for many networked systems worldwide. Computing systems utilize Ethernet for communicating by assembling data into packets which are transmitted over the wire or "Ether". Ethernet speeds

originally began widespread adoption at the 10 Mbps level and have since increased at 10x intervals so that today 100 Mbps is the typical speed for computers on Local Area Network Connections. 1000 Mbps or 1Gbps (Gigabits/sec) is also common to high-speed workstations, computers, and homes, 10 Gbps is typically a metro backbone link, and 100 Gbps are typically used on Internet Backbone connections between providers.

Fixed Rate: A specific amount of data sent or received in one continuous operation, usually done at a regular or preset rate.

Gateway: A device used to provide an entrance and exit to a communications network.

Gbps: Gigabits per second. Gig is one thousand million bits per second.

Internet Access Provider (IAP): One of several large companies that offers access directly to the Internet. An IAP has the equipment and the telecommunication line access required to have a point-of-presence (PoP) on the Internet for the geographic area served.

Internet Protocol (IP) Multicast: A method of sending Internet Protocol (IP) datagrams to a group of interested receivers in a single transmission. It is often employed for streaming media applications on the Internet and private networks. The method is the IP-specific version of the general concept of multicast networking. IP multicast is a technique for one-to-many and many-to-many real-time communication over an IP infrastructure in a network. It scales to a larger receiver population by requiring neither prior knowledge of a receiver's identity nor prior knowledge of the number of receivers. Multicast uses network infrastructure efficiently by requiring the source to send a packet only once, even if it needs to be delivered to a large number of receivers. The nodes in the network (typically network switches and routers) take care of replicating the packet to reach multiple receivers such that messages are sent over each link of the network only once.

ISP-Internet Service Provider: An Internet Service Provider may provide other services than just Internet as the term implies. *See Also: Service Provider.*

Layer 2: Layer 2 refers to the Data Link layer of the commonly-referenced multilayered communication model, Open Systems Interconnection (OSI). The Data Link layer is concerned with moving data across the physical links in the network. In a network, the switch is a device that redirects data messages at the layer 2 level, using the destination Media Access Control (MAC) address to determine where to direct the message.

Layer 3: Layer 3 refers to the Network layer of the commonly-referenced multilayered communication model, Open Systems Interconnection (OSI). The Network layer is concerned with knowing the address of the neighboring nodes in the network, selecting routes and quality of service, and recognizing and forwarding to the Transport layer incoming messages for local host domains.

Local Loop: A local loop is the connection from a communication company's central office in a locality to its customers' premises, at homes and businesses. The District currently provides Local Loops via fiber-optics.

MAC/MAC Address: MAC is an abbreviation and acronym applied to the term Media Access Control. A "MAC Address" is a hardware identification number that uniquely identifies each device on a network. The MAC address is manufactured into every network card, such as an Ethernet card, and therefore cannot be changed. A network device needs to have a unique MAC address. MAC addresses are made up of six two-digit hexadecimal numbers, separated by colons. For example, an Ethernet card may have a MAC address of 00:0d:83:b1:c0:8e.

Mbps: Mbps stands for millions of bits per second or megabits per second and is a measure of bandwidth (the total information flow over a given time) on a telecommunications medium. Depending on the medium and the transmission method, bandwidth is also sometimes measured in the Kbps (thousands of bits or kilobits per second) range or the Gbps (billions of bits or gigabits per second) range.

Meet-me: A pre-determined point between communications networks, where information is transferred and/or cross connected.

Metro Ethernet Forum (MEF): Metropolitan Ethernet (Metro Ethernet) refers to using carrier Ethernet technology in metropolitan networks. Corporations, academic institutions and government agencies in large cities use Metro Ethernet to connect branch campuses and offices to the Internet. Metro Ethernet connects business local area networks (LAN) and end users to wide area networks (WAN) or the Internet. Metro Ethernet is a service provider collection of Layer 2 or Layer 3 switches or routers connected through optical fiber. The topology may be a ring, hub and star or full or partial mesh.

MRC: Monthly Recurring Charge, occurring every month.

Multihomed/Multihoming: Refers to a computer or device connected to more than one computer network or service. It can be used, for example, to increase the reliability of an Internet Protocol (IP) network, such as a user served by more than one Internet service provider.

NRC: Non-Recurring Charge, a one-time charge.

NTE-Network Terminating/Termination Equipment: Defines the terminating device installed by the District, delivering services to the Service Provider's End-users. The term NTE is interchangeable with Customer Premises Equipment (CPE), Premise Gateway Device (PGD), and/or Optical Network Terminal (ONT).

ONT-Optical Network Terminal: Defines the terminating device installed by the District, delivering services to the Service Provider's End-users. Also may be referred to as a Premises Gateway Device (PGD), Customer Premises Equipment (CPE) and/or Network Terminating Equipment (NTE).

Pathway: A communications pathway is analogous to a circuit, which connects two or more points to exchange information.

PGD-Premises Gateway Device: Defines the terminating device installed by the District, delivering services to the Service Provider's End-users. Also may be referred to as an Optical Network Terminal (ONT), Customer Premises Equipment (CPE) and/or Network Terminating Equipment (NTE).

Point-to-Point: Connecting location A with location B via communications circuits.

Point-to-Multipoint: Connecting multiple locations together via communication circuits.

PoP: A point-of-presence (PoP) is an access point to the Internet with a unique Internet Protocol (IP) address. An Internet service provider (ISP) has a point-of-presence on the Internet and probably more than one.

POTS: Plain Old Telephone Service. The basic service supplying standard single line telephones, telephone lines and access to the public switched network.

Port(s): The physical interface between a device and a circuit, located on the End-user Gateway device for provision of Service Providers' telecommunications services.

PRI-Primary Rate Interface. A term used to describe a DS-1 rate access to a network that supports standard combinations of channels with a 1536 Kbit/s payload.

Provision / Provisioning, Re-provisioning: The act of placing service upon a broadband network. Provisioning is typically done through the ordering of a service. Re-provisioning is often done in the process of troubleshooting in an effort to reset the service.

Service Provider: Includes Third Party Services Providers as defined in the Electric Service Regulations and other authorized entities including Public Utility Districts and NoaNet.

Service-Off Provisioning Hold: Allows a POTS line to be temporarily turned off during seasonal periods of non-use, while holding the provisioning information including the phone number for an end-user.

SONET: Synchronous Optical NETWORK. An optical interface standard that allows flexibility in transporting many digital signals with different capacities, and to provide a design standard for manufacturers.

STS-1/STS-3: Synchronous Transport Signal level 1. An electrical signal that is converted to or from SONET's optically based signal; equivalent to the OC-1 signal of 51.84 Mbps. STS-3 is equivalent in bandwidth to 3 STS-1's.

Symmetrical: The term symmetric (also symmetrical) refers to any system in which data speed or quantity is the same in both directions, averaged over time. Examples include two-way radio, standard twisted-pair telephone Internet connections, cable modem Internet connections in which the cable is used for transmission as well as for reception, and full-motion videoconferencing.

TDM-Time Division Multiplex: A technique for transmitting a number of separate data, voice and/or video signals simultaneously over one communications medium by quickly interleaving a piece of each signal one after another.

UPS-Uninterrupted Power Supply: A device that supplies reliable and continuous power to the Network Termination Equipment (NTE). The UPS system is comprised of two major components, which may be integrated into a single enclosure, which include the power supply unit and the sealed battery (charged by the power supply unit).

Video/Video Transport: Video is the recording, producing, or broadcasting of moving visual images. Video Transport is the placing of video on a medium for transmission or broadcasting.

VLAN: A virtual (or logical) LAN is a local area network with a definition that maps workstations on some other basis than geographic location (for example, by department, type of user, or primary application). The virtual LAN controller can change or add workstations and manage load balancing and bandwidth allocation more easily than with a physical picture of the LAN. Network management software keeps track of relating the virtual picture of the local area network with the actual physical picture.

Voice over Internet Protocol (VoIP): A technology for transmitting ordinary telephone calls over the Internet using packet-linked routes.

Wireless: Wireless is a method of transmitting data without wires using a system of transmitters and antennas.

Wholesale Telecommunications Services (or sometimes referred to herein as Telecommunications Services): The provision of telecommunications services or facilities for resale by authorized Service Providers, all as defined by RCW 54.16.005 as now exists or as may be hereafter amended.

PUBLIC UTILITY DISTRICT NO. 1 OF CHELAN COUNTY, WASHINGTON
RATE SCHEDULE 100
WHOLESALE TELECOMMUNICATION SERVICES – DATA LOCAL LOOP (DLL) SERVICES

AVAILABLE: To Service Providers and District Business Units desiring to use the District's Wholesale Broadband System. District reserves the right at its sole option to discontinue services listed in this rate schedule at any time. All services are subject to Availability.

EFFECTIVE: The rates herein are effective **January 1, 2018**.

PRODUCT SUMMARY: The District offers local loop data connectivity to the End-user premises, to Service Providers. Data Local Loop (DLL) services includes Domain Name System (DNS) services. Local loops are offered in Symmetrical and Asymmetrical form. In addition to DLL charges, Service Providers will be billed for Aggregate Transport Bandwidth usage. Other optional services in Rate Schedule 100 include IP Multicast and VOIP services when purchased with the DLL or other data-type service provided by an ONT including but not limited to VLAN service. DLL Services are best effort services for residential and business internet access. Specifications for residential and business DLL services are listed below in Table 1 and 2, respectively, at the end of this schedule. For the operation of commercial type services such as servers a dedicated bandwidth service other than DLL must be used from schedule 200, 300 or 400.

AGGREGATE TRANSPORT BANDWIDTH: Purchase of a DLL service connection includes charges for bandwidth usage utilizing a rate range specified in the table below. Usage charges will be based on an aggregated bandwidth revenue requirement calculated annually. Usage charges will be within the rate range specified below and adjusted quarterly for the purpose of meeting the annual core services revenue requirement.

The annual core services revenue requirement is based on projected costs to provide and maintain core services.

Core services include:

- DLL services provided at 100 Mbps and 1 Gbps speeds, measured by the number of connections.
- Bandwidth consumed by each Service Provider measured in gigabytes and normalized.
- Voice
- Video

The aggregated bandwidth revenue requirement is calculated annually by the District as follows: Projected annual core services revenue requirement less fixed rate and charges revenue attributable to the provision of core services.

The initial aggregate bandwidth rate and quarterly adjustments are calculated as follows:

- The target aggregated bandwidth revenue requirement
- Divided by the average aggregate bandwidth forecast as determined by the District
- Adjusted quarterly based on previous quarters actual aggregated bandwidth usage
- Applied to each service providers normalized average bandwidth usage on a monthly basis

Normalized Gigabyte Calculation

Two-way aggregate data usage of each Service Provider that offers DLL services forecasted on a quarterly basis. Data usage will be measured each month by the District and will be applied to data traffic using DLL services. Data usage will be expressed in terms of gigabytes and will be calculated by adding together total upload gigabytes and download gigabytes for the given forecasting period and normalized based on the previous quarter.

The District reserves the right to adjust the range of rates dependent upon the revenue needs of the District and the bandwidth usage of the Service Providers.

Provided, however, that the aggregate bandwidth rate, as computed above on a forecasted basis, shall not increase by more than 5% for the next year without Board approval.

INTERNET PROTOCOL MULTICAST (IPTV): Internet Protocol (IP) Multicast (IPTV) charges shall apply where the Service Provider provides IPTV services to End-users. A one-time Non-Recurring Charge will be charged to establish IPTV Quality of Service parameters.

BILLING RATES: Use of the Broadband System shall be billed in accordance with the rates listed below. Service Providers will be charged on a monthly basis according to the rates set forth herein. Any additional charges that are incurred for special equipment, provisioning, or charges from other carriers will be passed on to the Service Provider by the District and the Service Provider shall be responsible for payment. Rates are per Service Provider's End-users and may not be resold to more than one End-user.

PROVISIONING: Services are offered on a commercially reasonable basis and are provisioned to allow the bandwidth as specified. Actual bandwidth obtained by Service Providers and/or their End-users is subject to many factors, not within District control and is not guaranteed. Upon Service Provider request, and at the District's discretion, lower or intermediate bandwidth packages may be provisioned for the Service Provider at the same pricing as the next higher bandwidth package.

SERVICE LEVEL: Service includes Network Operations Center (NOC) support and local network administration support. If field dispatch is requested outside normal defined business hours, a dispatch fee will be assessed. All services provided on a 24/7 basis.

NON-RECURRING CHARGES (NRC): Non-Recurring Charges (NRC)'s may apply to each of the Services. Fees will be charged per order, regardless of number of services. Installation fee will only be charged when installation of an NTE is required. Service Providers will incur charge at the time of request on a per order basis. Fees and any other associated charges will be billed at time of service billing. Additional charges for special equipment may apply. See Wholesale Telecommunications Services Fees & Charges Schedule.

Data Local Loop – Residential*(See Table 1 Below for Specifications)	Unit of Measure	Monthly Rate
Data Local Loop Access Fee per End-user. Aggregate Transport Bandwidth rates apply.		
Ethernet Service Connection to SP - up to 100 Mbps X 10 Mbps	Each	\$12.00
Aggregate Transport Bandwidth	Gigabyte	\$0.05 - \$0.105
Ethernet Service Connection to SP - up to 100 Mbps X 100 Mbps	Each	\$24.00
Aggregate Transport Bandwidth	Gigabyte	\$0.05 - \$0.105
Ethernet Service Connection to SP - up to 1 Gbps X 100 Mbps	Each	\$36.00
Aggregate Transport Bandwidth	Gigabyte	\$0.05 - \$0.105

Data Local Loop – Business **(See Table 2 Below for Specifications)	Unit of Measure	Monthly Rate
Data Local Loop Access Fee per End-user. Aggregate Transport Bandwidth rates apply.		
Ethernet Service Connection to SP - up to 100 Mbps X 10 Mbps	Each	\$13.20
Aggregate Transport Bandwidth	Gigabyte	\$0.05 - \$0.105
Ethernet Service Connection to SP - up to 100 Mbps X 100 Mbps	Each	\$26.40
Aggregate Transport Bandwidth	Gigabyte	\$0.05 - \$0.105
Ethernet Service Connection to SP - up to 1 Gbps X 100 Mbps	Each	\$39.60
Aggregate Transport Bandwidth	Gigabyte	\$0.05 - \$0.105

Optional Services Over Data Local Loop (DLL)	Unit of Measure	Monthly Rate
Internet Protocol (IP) Multicast		
IP Multicast, per End-user	Each	\$2.90

SPECIFICATIONS

*Table 1
Residential DLL (E-Tree)

EVC Service Attribute	Values
EVC Type	Rooted-Multipoint
EVC ID	HSI
UNI List	1-Root UNI \geq 2 Leaf UNIs {<U1, Role=Root>, <U2, Role=Leaf>, <U3, Role=Leaf>}
Max Number of UNIs	Must be \geq 3
Unicast Service Frame	Conditional – Dynamic learning DHCP
Broadcast Service Frame	Discard
CE-VLAN ID Preservation	Not Enabled
CE-VLAN CoS Preservation	Not Enabled
MTU	\leq 1500
EVC Performance	CoS Name =BE
Intended Customer	Single End-User
Source MAC Address Limit	2
Intended Gateway	Residential Gateway with Private IP Addresses
Static IP Routing	No

Key Attributes:

- IP Address must be assigned dynamically via DHCP
- Maximum of 2 DHCP leases
- Static IP assignment and/or static IP routing is not allowed
- MTU is fixed 1500 Bytes
- All traffic will be classified as “best effort”
- The DLL service is for one single End-User only and is not to be sold or re-sold
- MAC addresses are limited to 2 source MAC addresses

- The intended End-User device is a Residential Gateway Firewall using Private IP addresses on the LAN translated to a publically routable IP address on the WAN obtained via DHCP

**Table 2
Business DLL (E-Lan)

EVC Service Attribute	Values
EVC Type	Point-to-Point
EVC ID	HSI
UNI List	2 Root UNIs {<U1, Role=Root>, <U2, Role=Root>}
Max Number of UNIs	2
Unicast Service Frame Delivery	Deliver Unconditionally
Broadcast Service Frame Delivery	Deliver Unconditionally
Multicast Service Delivery	Deliver Unconditionally
CE-VLAN ID Preservation	Not Enabled
CE-VLAN CoS Preservation	Not Enabled
MTU	≤ 1500
EVC Performance	CoS Name =BE
Intended Customer	Single End User
Source MAC Address Limit	10/UNI
Intended Gateway	Router with Private or Public Statically Routed IP Addresses
Static IP Routing	Yes

Key Attributes

- IP Address must be assigned dynamically via DHCP
- Point-to-point from RSP ENNI to End-User only
- Maximum of 10 DHCP leases
- Static IP routing is allowed
- MTU is fixed 1500 Bytes

- All traffic will be classified as “best effort”
- The DLL service is for one single End-User only and is not to be sold or re-sold
- MAC addresses are limited to 10 source MAC addresses
- The intended End-User device is an IP Router

PUBLIC UTILITY DISTRICT NO. 1 OF CHELAN COUNTY, WASHINGTON
RATE SCHEDULE 200
WHOLESALE TELECOMMUNICATION SERVICES –VIRTUAL LOCAL AREA NETWORK (VLAN)

AVAILABLE: To Service Providers and the District desiring to use the District’s Wholesale Broadband System. District reserves the right at its sole option to discontinue services listed in this rate schedule at any time. All services are subject to Availability.

EFFECTIVE: The rates herein are effective **January 1, 2018**.

PRODUCT SUMMARY: The District offers Layer 2, Point-to-Point and Point-to-Multipoint Ethernet transport VLAN with Metro Ethernet Forum attributes applied. Services offered as Fixed Rate or Burstable Rate products.

BILLING RATES: Use of the Broadband System shall be billed in accordance with the rates listed below. Service Providers will be charged on a monthly basis according to the rates set forth herein. Any additional charges that are incurred for special equipment, provisioning, or charges from other carriers will be passed on to the Service Provider by the District and the Service Provider shall be responsible for payment. Rates are per Service Provider’s End-users and may not be resold to more than one End-user.

PROVISIONING: Services are offered on a commercially reasonable basis and are provisioned to allow the bandwidth as specified. Actual bandwidth obtained by Service Providers and/or their End-users is subject to many factors, not within District control and is not guaranteed. Upon Service Provider request, and at the District’s discretion, lower or intermediate bandwidth packages may be provisioned for the Service Provider at the same pricing as the next higher bandwidth package.

SERVICE LEVEL: Service includes Network Operations Center (NOC) support and local network administration support. If field dispatch is requested outside normal defined business hours, a dispatch fee will be assessed. All services provided on a 24/7 basis.

METRO ETHERNET FORUM ATTRIBUTES: Purchase of this service requires the Service Provider to meet the following standards:

- **Protocols** – The District will not impede the passing of any protocol frames on the Ethernet Virtual Connection (EVC) for the specific type of service (EPL, EVPL, etc...) whilst adhering to the standards set forth in MEF 6 which specifically addresses L2CP protocols. Any impediment or modification of protocol frames not specified by the MEF standards will constitute a service

outage. This shall include, but not be limited to, topology discovery protocols, routing protocols, multicast protocols, streaming protocols, and voice protocols.

- **Maximum Transmission Unit (MTU)** – The District shall allow the customer to be able to transmit up to a 9000 byte frames on 1G and higher links (not inclusive of Link Aggregation Group – LAG – links, unless one of the subtended circuits on the LAG is of 1G or higher bandwidth). The District shall allow the use of 1500 byte frames on all Ethernet transport circuits.
- **“Out of Service” Definition** - The definition of “out of service” is the inability to reliably pass data at the purchased rate on any Service Provider managed transport path due to excessive latency, errors, loss or violations.
- **Service Interface & Termination Requirements** - Unless otherwise specified by the Service Provider, the interfaces provided to the Service Provider locations must be administratively configured for use as a fixed full duplex 100 Mbps, 1,000 Mbps or 10,000 Mbps interface per the resulting work order or site agreement. Auto negotiate will be used when available. The District is responsible for all access and fiber/cabling to the point of service handoff at the customer premise equipment (switch, ONT, router).
- **Link Aggregation** - If the Service Provider orders an aggregated Ethernet service from the District, the District must support Link Aggregation Control Protocol (LACP) via the IEEE 802.3ad standard while keeping in compliance with MEF standards set forth in MEF 10. If and/or where possible, the Purchaser would prefer to have the LACP configuration to be a Multi-Chassis LACP Configuration, providing chassis redundancy in addition to link redundancy. While aggregation of Ethernet services is not a mandatory requirement, the use of LACP in instances where this service is provided is mandatory.
- **Ethernet Standards** – The District’s Ethernet interface provided at the Service Provider’s point-of-presence must adhere to IEEE 802.3 standards for Ethernet, depending on the service purchased at the location by the Service Provider.
- **VLAN** – The District’s Ethernet services must provide support for Virtual Local Area Network (VLAN) via the IEEE 802.1Q standard.
- **BPDU**s - Except for specific L2CP protocols as specified by the Metro Ethernet Forum (MEF) Ethernet Services Definitions – MEF 6, the District shall not manipulate any Bridge Protocol Data Units (BPDU) which are sent along the circuit by the Service Provider without the provider’s expressed consent.

- **Spanning Tree Protocols** - Except for specific L2CP protocols as specified by the Metro Ethernet Forum (MEF) Ethernet Services Definitions – MEF 6, the District shall not impede the operation of any spanning tree protocols, including, but not limited to; Spanning Tree Protocol (STP), Per-VLAN Spanning Tree (PVST), Per-VLAN Spanning Tree Plus (PVST+), Rapid Spanning Tree Protocol (RSTP), Rapid Per-VLAN Spanning Tree Protocol (R-PVST), Multiple Spanning Tree Protocol (MSTP), VLAN Spanning Tree Protocol (VSTP), without the Service Provider's expressed consent.
- **VLAN Tags** - In accordance with established standards in MEF 6, the District shall not rewrite any VLAN tags affixed to packets by the Service Provider without expressed consent. The District shall also ensure that they do not impede the ability of the Service Provider to utilize 802.1ad tagging, also known as Q-in-Q.
- **Marking of Traffic** – The District must not mark or remark any traffic without approval from the Service Provider. The Service Provider will expect that all traffic leaving a site will arrive after traversing the District's network with the same markings it left with (QoS, Multicast, etc.).

NON-RECURRING CHARGES (NRC): Non-recurring charges (NRC)'s may apply to each of the Services. Fees are charged per order, regardless of number of services ordered. Additional charges for special equipment may apply. Fees and any other associated charges will be billed at time of service billing. The VLAN NRC will be reduced to 20% of the standard NRC for changes to an existing VLAN that only require provisioning. See Wholesale Telecommunications Services Fees & Charges Schedule.

Virtual Local Area Network (VLAN)	Unit of Measure	Monthly Rate
<p>Metro Ethernet Forum attributes applied. Multiple VLAN's can occur on a single port. Pricing for Point-to-Point and Point-to-Multipoint services are offered either as Fixed Rate or Burstable Rate products. All services allow up to 100 MAC Addresses per port, with a maximum of up to 4000 per VLAN. Network capacity of MAC addresses and speed may be a limitation of Network Termination Equipment (NTE). The District reserves the right to limit network parameters and performance based on NTE and other factors that may not be fully expressed until a detailed network design is completed. Charges apply to each additional block of 50 MAC Addresses. **</p>		
<i>Fixed Rate</i>		
50 Mbps per VLAN/Port	Port	\$112.16
100 Mbps per VLAN/Port	Port	\$499.50
1 Gbps per VLAN/Port	Port	\$999.00
<i>Burstable Rate*</i>		
50 Mbps per VLAN/Port	Port	\$112.16
100 Mbps per VLAN/Port	Port	\$499.50
Burst Above CIR – 50 Mbps per VLAN/Port	Mb	\$8.81
Burst Above CIR – 100 Mbps per VLAN/Port	Mb	\$1.15
<i>**MAC Address Blocks for Additional VLAN Capacity</i>		
Block Increments of 50 MAC addresses	Block	\$75.00
*Usage measured and billed on 95 th percentile of total ingress traffic, measured per VLAN per port, over full month. Burst usage rounded up to next full Mbps.		

PUBLIC UTILITY DISTRICT NO. 1 OF CHELAN COUNTY, WASHINGTON
RATE SCHEDULE 300
WHOLESALE TELECOMMUNICATION SERVICES – FIBER PATHWAY SERVICES

AVAILABLE: To Service Providers who have entered into an approved Telecommunications Facilities License Agreement with the District and after determination of Availability. This Rate Schedule 300 shall only be applicable to existing District fiber facilities. This Rate Schedule 300 shall not be constructed to create any obligation on the part of the District to construct any new fiber facilities. All services are subject to Availability.

EFFECTIVE: The rates herein are effective **January 1, 2018**.

PRODUCT SUMMARY: The District offers fiber pathway services. Services offered as Dark Fiber, Critical Dark Fiber or Coarse Wave Division Multiplexing (CWDM) products.

BILLING RATES: Term of License Agreement shall not exceed 36 months and may be renewed one time for up to the length of the initial term. Rates for the renewal period will be from the District's Rate Schedule 300 in effect 60 days prior to the beginning of the renewal period. Any additional charges that are incurred for special equipment, provisioning, or charges from other carriers will be passed on to the Service Provider by the District and the Service Provider shall be responsible for payment.

PROVISIONING: Services are offered on a commercially reasonable basis and are provisioned to allow the bandwidth as specified. Actual bandwidth obtained by Service Providers and/or their End-users is subject to many factors, not within District control and is not guaranteed. Upon Service Provider request, and at the District's discretion, lower or intermediate bandwidth packages may be provisioned for the Service Provider at the same pricing as the next higher bandwidth package.

SERVICE LEVEL: Service includes Network Operations Center (NOC) support and local network administration support. If field dispatch is requested outside normal defined business hours, a dispatch fee will be assessed. All services provided on a 24/7 basis.

NON-RECURRING CHARGES (NRC): Non-recurring charges (NRC)'s may apply to each of the Services. Fees are charged per order, regardless of number of services ordered. Additional charges for special equipment may apply. Fees and any other associated charges will be billed at time of service billing. See Wholesale Telecommunications Services Fees & Charges Schedule.

Dark Fiber Pathway Services	Unit of Measure	Monthly Rate
Dark Fiber Component Maximum Order - 4 stands. Minimum mileage fixed charge for first 14 miles.		
Dark Fiber Pathway		
Single Pair, Non-Redundant Minimum Monthly Charge	Service	\$1,198.43
Single Pair, Non-Redundant, Length Additional Per Mile, Per Month Charge, Per Fiber Strand	Mile	\$42.80
Four Fiber Strands, Redundant Full Duplex Minimum Monthly Charge	Service	\$2,185.57
Four Fiber Strands, Redundant Full Duplex, Length Redundant fibers. Additional Per Mile, Per Month Charge, Per Fiber Strand	Mile	\$39.03
Single Fiber Minimum Monthly Charge	Service	\$669.75
Single Fiber, Length Additional Per Mile, Per Month Charge, Per Fiber Strand	Mile	\$47.84

Critical Dark Fiber Pathway		
Single Pair, Non-Redundant Minimum Monthly Charge	Service	\$2,397.04
Single Pair, Non-Redundant, Length Additional Per Mile, Per Month Charge, Per Fiber Strand	Mile	\$85.61
Four Fiber Strands, Redundant Full Duplex Minimum Monthly Charge	Service	\$4,371.07
Four Fiber Strands, Redundant Full Duplex, Length Redundant fibers. Additional Per Mile, Per Month Charge, Per Fiber Strand	Mile	\$78.06
Single Fiber Minimum Monthly Charge	Service	\$1,321.90
Single Fiber, Length Additional Per Mile, Per Month Charge, Per Fiber Strand	Mile	\$94.42

Coarse Wave Division Multiplex (CWDM)	Unit of Measure	Monthly Rate
CWDM wavelengths defined by ITU-T G.694.2. Point to Point application only. Minimum mileage fixed charge for first 14 miles.		
Simplex		
Lambda 1 Minimum Monthly Charge	Lambda	\$602.78
Additional Per Mile, Per Month Charge, Per Lambda	Mile	\$47.84
Duplex		
Lambda 1 Minimum Monthly Charge	Lambda	\$1,078.59
Additional Per Mile, Per Month Charge, Per Lambda	Mile	\$42.80
Lambda 2-8 Minimum Monthly Charge, Each Lambda	Lambda	\$898.82
Additional Per Mile, Per Month Charge, Per Lambda	Mile	\$42.80

PUBLIC UTILITY DISTRICT NO. 1 OF CHELAN COUNTY, WASHINGTON
RATE SCHEDULE 400
WHOLESALE TELECOMMUNICATION SERVICES – TIME DIVISION MULTIPLEX (TDM) SERVICES

AVAILABLE: To Service Providers and District Business Units desiring to use the District's Wholesale Broadband System. District reserves the right at its sole option to discontinue services listed in this rate schedule at any time. All services are subject to Availability.

EFFECTIVE: The rates herein are effective **January 1, 2018**.

PRODUCT SUMMARY: The District offers Time Division Multiplex (TDM) services. Services offered as DS-1 (PRI), DS3 (T3), STS-1 and STS-3 business transport products.

BILLING RATES: Use of the Broadband System shall be billed in accordance with the rates listed below. Service Providers will be charged on a monthly basis according to the rates set forth herein. Any additional charges that are incurred for special equipment, provisioning, or charges from other carriers will be passed on to the Service Provider by the District and the Service Provider shall be responsible for payment. Rates are per Service Provider's End-users and may not be resold to more than one End-user.

PROVISIONING: Services are offered on a commercially reasonable basis and are provisioned to allow the bandwidth as specified. Actual bandwidth obtained by Service Providers and/or their End-users is subject to many factors, not within District control and is not guaranteed. Upon Service Provider request, and at the District's discretion, lower or intermediate bandwidth packages may be provisioned for the Service Provider at the same pricing as the next higher bandwidth package.

SERVICE LEVEL: Service includes Network Operations Center (NOC) support and local network administration support. If field dispatch is requested outside normal defined business hours, a dispatch fee will be assessed. All services provided on a 24/7 basis.

NON-RECURRING CHARGES (NRC): Non-recurring charges (NRC)'s may apply to each of the Services. Fees are charged per order, regardless of number of services ordered. Additional charges for special equipment may apply. Fees and any other associated charges will be billed at time of service billing. See Wholesale Telecommunications Services Fees & Charges Schedule.

Time Division Multiplex (TDM) Services	Unit of Measure	Monthly Rate
STS-1 Synchronous Transport Service @ STS-1 Delivered Rate (51.84 Mbps)	Circuit	\$1,121.61
STS-3 Synchronous Transport Service @ STS-3 Delivered Rate (155.52 Mbps)	Circuit	\$3,275.00
DS1/PRI	Circuit	\$120.00
DS3/T3	Circuit	\$2,225.00

PUBLIC UTILITY DISTRICT NO. 1 OF CHELAN COUNTY, WASHINGTON
RATE SCHEDULE 500
WHOLESALE TELECOMMUNICATION SERVICES – MISCELLANEOUS SERVICES

AVAILABLE: To Service Providers and District Business Units desiring to use the District's Wholesale Broadband System. District reserves the right at its sole option to discontinue services listed in this rate schedule at any time. All services are subject to Availability.

EFFECTIVE: The rates herein are effective **January 1, 2018**.

PRODUCT SUMMARY: The District offers optional additional services with the purchase of the District's DLL service. Those services include telephony (POT's) and RF video transport. Other miscellaneous services offered include Internet Bandwidth, a Layer 3 transport and upstream Internet connectivity service to the District's upstream Multi-Homed Internet Access Provider (IAP), as well as Colocation floor space for equipment at District facilities.

BILLING RATES: Use of the Broadband System shall be billed in accordance with the rates listed below. Service Providers will be charged on a monthly basis according to the rates set forth herein. Any additional charges that are incurred for special equipment, provisioning, or charges from other carriers will be passed on to the Service Provider by the District and the Service Provider shall be responsible for payment. Rates are per Service Provider's End-users and may not be resold to more than one End-user.

BILLING RATES – AFTER HOURS RESPONSE: Service Providers will incur charge at the time of request on a per incident basis. Fees and any other charges will be billed at time of service billing.

BILLING RATES – CONSTRUCTION CHARGES & ENGINEERING/DESIGN FEES: Customer will incur charge at the time of request on a per order basis. Fees and any other charges will be collected prior to commencement of work.

PROVISIONING: Services are offered on a commercially reasonable basis and are provisioned to allow the bandwidth as specified. Actual bandwidth obtained by Service Providers and/or their End-users is subject to many factors, not within District control and is not guaranteed. Upon Service Provider request, and at the District's discretion, lower or intermediate bandwidth packages may be provisioned for the Service Provider at the same pricing as the next higher bandwidth package.

SERVICE LEVEL: Service includes Network Operations Center (NOC) support and local network administration support. If field dispatch is requested outside normal defined business hours, a dispatch fee will be assessed. All services provided on a 24/7 basis.

NON-RECURRING CHARGES (NRC): Non-recurring charges (NRC)'s may apply to each of the Services. Fees are charged per order, regardless of number of services ordered. Additional charges for special equipment may apply. Fees and any other associated charges will be billed at time of service billing. See Wholesale Telecommunications Services Fees & Charges Schedule.

Miscellaneous Services	Unit of Measure	Monthly Rate
Telephony Services		
(Available only when an ONT provided data-type service is purchased)		
Traditional Voice Service (POTS not VOIP) Dial-Tone Only	Each	\$5.50
Video Transport Services		
(Available only when an ONT provided data-type service is purchased)		
RF Video Transport Services	Each	\$2.90
Colocation of Equipment in District Facilities		
(When space and appropriate facilities are Available and required agreement executed)		
Floor Space	Sq/Ft	\$23.95
Real estate floor space rounded up to nearest Sq/Ft		
Internet Bandwidth		
The District offers Layer 3 transport and upstream Internet connectivity to the District's upstream Multi-Homed Internet Access Provider (IAP). Internet is offered on a 100 Mbps Internet access port. Port speed Committed Information Rate (CIR) and Burstable Rate in megabits per second (Mbps). Internet bandwidth is burstable above the minimum commitment level at the burst price related to the minimum commitment level. Service Provider may choose to fix their maximum bandwidth burst at the commitment level or at a higher level at the time of signup, at whole, not partial Mbps. Internet Bandwidth is billed at the 95th percentile of the greater of inbound or outbound traffic, measured over a full month. If a Service Provider's usage is measured at less than its committed level, it will pay the minimum monthly committed amount. Pricing includes transport to delivery points on the District's network.		
30 Mbps Internet Connection (Burst up to 100Mbps)	Port	\$825.00
50 Mbps Internet Connection (Burst up to 100Mbps)	Port	\$1,550.00
100 Mbps Internet Connection (Non-Burstable)	Port	\$2,870.00
Burst Charge Above CIR per Month per Mb*	Mb	\$38.35