REGULAR MEETING AND SPECIAL PUBLIC HEARINGS OF THE NORTH BEND PLANNING COMMISSION
Wednesday April 3, 2024, 6:30 PM
City Hall, 920 SE Cedar Falls Way, North Bend, WA

AGENDA

1) **Call to order and roll call, Planning Commission**
2) **Approval of minutes from March 6, 2024 meeting.**
3) **Opportunity for public comment on non-agenda items (3 minutes per person)**
4) **Non-Conforming NBMC Code Amendment Introduction, Public Hearing and Recommendation** **Pg. 4**
5) **Utilities Element Introduction and Hearing- 2024 Comprehensive Plan Update** **Pg. 8**
6) **Adjournment by 8:30 unless otherwise approved.**

PLEASE NOTE: Members of the public may choose to attend the meeting in person or by teleconference. Members of the public attending the meeting in-person will have an opportunity to provide public comment and if attending the meeting by teleconference may submit written comments via in-person drop off, mail, fax, or e-mail to rdeming@northbendwa.gov. All written comments must be received by 4 p.m. on the day of the scheduled meeting and must be 350 words or less. If an individual requires an accommodation because of a difficulty attending the public meeting, the City requests notice of the need for accommodation by 3:30 p.m. on the day of the scheduled meeting. Participants can request an accommodation to be able to provide remote public comments by contacting the City by phone (425) 888-5633 or by e-mail to rdeming@northbendwa.gov. No other remote public comment will be permitted. Those wishing to access the meeting by teleconference will be required to have a registered Zoom account and display your full name to be admitted to the online meeting.

Zoom Meeting Information:
To Sign Up for a Zoom Account: https://zoom.us/join
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Call In Phone Number: 1-253-215-8782

REGULAR MEETING OF THE
NORTH BEND PLANNING COMMISSION
- ACTION MEETING MINUTES -
Wednesday, March 6, 2024, 6:30 PM

This meeting was held at City Hall, 920 SE Cedar Falls Way, North Bend, WA, and was also available online. A complete video recording of this meeting is available on the City of North Bend YouTube website, at www.youtube.com, under "City of North Bend."

AGENDA ITEM #1: CALL TO ORDER
The meeting was called to order at 6:30 PM.

ROLL CALL
Planning Commissioners present: Brian Fitzgibbon, Juliano Pereira, Sam White, James Boevers, Hannah Thiel, Stephen Matlock and Olivia Moe.
City Staff Present: Rebecca Deming, Community & Economic Development Director, Mike McCarty, Principal Planner, Jamie Burrell, Senior Planner

AGENDA ITEM #2: Approval of minutes from February 7, 2024 meeting
Motion by Commissioner Matlock, seconded by Commissioner Fitzgibbon to approve the February 7, 2024 meeting minutes. The motion passed unanimously.

AGENDA ITEM #3: Opportunity for Public Comment on non-agenda items
No comment was received.

AGENDA ITEM #4: Zoning/Docket Request Discussion (2024 Comprehensive Plan Update)
CED Director Rebecca Deming provided an introduction of the zoning/land use related dockets submitted for consideration with the City's 2024 Comprehensive Plan Update, seeking direction from the Commission on the dockets received. The public in attendance was provided with the opportunity to speak to the dockets they were here for.

1. EP-1 to LDR request for Yee Property, parcel 0523089016. Owner Jeffrey Yee spoke to the request in consideration of the context of the topographical constraints of his property, much of which is not well suited for the pad sizes typical for light industrial development.
2. EP-1 to LDR request for Maguire property (1525 NW 9th Street, including parcels 0823089021 and 08239022), immediately south of the Yee property). Property owner was not at this meeting. Request is to rezone to LDR, given an existing single-family home on the property. The home was destroyed in a fire about a year ago, and the owner would like to reconstruct, but not be limited to the constraints applied by the legal nonconforming use regulations, given that single-family isn't allowed in the EP-1 zone.
3. LDR to HDR for Glazier Property (12414 412 Ave. SE). Owner Craig Glazier spoke to the request, noting adjacency of this property to the extensive commercial uses in the Mountain Valley Center just west of his property, and opportunity for the City to connect a trail and bridge across the river from the rear of his property into the downtown area from Shamrock Park, linking to the commercial area to the west. He would like the City to rezone the property to HDR, and to annex the property to enable it to be developed according that zoning.
4. LDR to DC for a block of properties between Torguson Park and Cedar Falls Way, from the Cedar Falls Way Roundabout east to Maloney Grove Ave. SE. At a previous meeting, the Planning Commission provided direction to rezone these properties from LDR to DC in consideration of need to meet the City's housing targets at more affordable brackets. Property owner Craig Goldsmith spoke to a desire to rezone this area to Downtown Commercial to better reflect the adjacency to the downtown area and expand

potential commercial and multifamily uses. Property Owner Duncan Sailors spoke to a desire to rezone his property directly next to the roundabout to DC to reflect the existing commercial use of the property.

The Planning Commission concurred with the citizen-requested dockets presented at tonight's meeting and provided direction to the City staff to pursue amendments to the Zoning Map and Land Use Designation Map to revise these properties accordingly, subject to consideration of public comment received at a future hearing.

AGENDA ITEM #5: Emergency Housing Discussion (2024 Comprehensive Plan Update)

CED Director Rebecca Deming provided an introduction and summary of the requirements applicable to the City of North Bend under recent amendments to the Washington State Growth Management Act to accommodate Emergency Housing as an allowed use within the City, together with the City's 2024 Comprehensive Plan Update. Ms. Deming noted that if the City allows Emergency Housing (including emergency shelters and indoor emergency housing) as a permitted use in any zone in which the City permits a hotel as an allowed use, the City does not need to provide a more extensive analysis to determine it has zoning capacity to meet the specific targets assigned by the Puget Sound Regional Council for these uses.

The Planning Commission provided consensus to revise the Zoning Table of Uses to allow both Hotels and Emergency Housing as permitted uses in the DC, IC, IMU, NB-2, and EP2 zones, and to not allow Hotels and Emergency Housing in the NB Zone.

AGENDA ITEM #6: Adjournment by 8:30 PM unless otherwise approved by the Commission

The Meeting was Adjourned at 7:44 PM.

Staff Report and Planning Commission Recommendation
To Amend Municipal Code Chapter 18.30 Nonconforming Use

Meeting Date: April 3, 2024

Proponent: City of North Bend

Staff Recommendation: A Motion to recommend City Council approval of the proposed Ordinance amending NBMC Chapter 18.30 Nonconforming Use, Repair/restoration if damaged.

I. Purpose of Proposed Municipal Code Amendments:

The City of North Bend is proposing amendments to North Bend Municipal Code Title 18, Chapter 18.30 Nonconforming Uses, 18.30.040 Repair/restoration if damaged. The City of North Bend wishes to allow Twenty-four (24) months instead of Twelve (12) months for work to commence for a nonconforming building, structure or land use damaged by fire or other calamity to be restored.

II. Proposed Amendments

1. **18.30.040 Nonconforming use – Repair/restoration if damaged.**
   A nonconforming building, structure, or land use (as applicable) having been damaged or destroyed by fire or other calamity to any extent may be restored, and its immediate previous occupancy or use existing at the time of such destruction may be continued or be resumed; provided, that the necessary permits are issued and reconstruction work is commenced within ~~one year~~ *Twenty-four (24) months* of the date of such destruction; provided, that:
   A. Such building, structure, or land use (as applicable) must either be located exactly in its previous footprint and envelope, or made to conform to the bulk, dimensional, and performance standards of the zoning district in which it lies;
   B. Nonconforming signs (nonconforming as to use or bulk regulations) must meet existing zoning district regulations if damaged beyond 50 percent of replacement valuation of the sign, excluding the sign support structure;
   C. In no case shall any prohibited uses as designated under NBMC 18.10.030 be permitted to be repaired or restored if damaged beyond 25 percent of assessed valuation. (Ord. 1256 § 1 (part), 2006: Ord. 1020 (part), 1997).

This amendment is to allow additional time for work to commence on non-conforming buildings, structures, or land uses when unexpected damage occurs.

See attached Exhibit A for the proposed Ordinance.

IV. Impacts of Proposed Amendment

NBMC 20.08.070 and .080 requires that applications for municipal code amendments be evaluated for their environmental, economic, and cultural impacts, as well as impacts to surrounding properties. These impacts are evaluated below.

1) **Environmental Impacts**. No environmental impacts are anticipated from amending NBMC Chapter 18 cited above. Regulations protecting critical areas, managing stormwater runoff, and controlling floodplain impacts are governed by the Critical Area Regulations in NBMC Title 14, and apply regardless of what type of development occurs on a site.

2) **Economic Impacts**. A benefit is expected to property owners who need more time to obtain contractors and/or work through insurance claims to begin work.

3) **Cultural Impacts**. No significant cultural impacts are anticipated from the amendments. All proposed projects must plan for protecting cultural resources.

4) **Impacts to Surrounding Properties**. The proposed changes protect the integrity of surrounding uses by incorporating requirements equally.

V. Compatibility of Proposed Amendment with North Bend Comprehensive Plan (NBCP)
In accordance with NBMC 20.08.070 and .080, applications for municipal code amendments must be evaluated for compliance with the Comprehensive Plan. The proposed amendments are in compliance with the Comprehensive Plan.

VI. Compatibility of Proposed Amendment with the North Bend Municipal Code (NBMC)
In accordance with NBMC 20.08.070 and .080, applications for municipal code amendments must be evaluated for compliance with the North Bend Municipal Code. The proposed amendment is compatible with the North Bend Municipal Code.

VII. Planning Commission Findings and Analysis
Pursuant to NBMC 20.08.100, the Planning Commission shall consider the proposed amendment against the criteria in NBMC 20.08.100 (B). A staff analysis is provided in italics under each criterion below.

1. Is the issue already adequately addressed in the Comprehensive Plan?
   The Comprehensive Plan does not address the proposed amendment.
2. If the issue is not addressed in the Comprehensive Plan, is there a need for the proposed change?
   Yes. The proposed change allows property owners additional time to begin repair or restoration work for nonconforming uses.
3. Is the proposed change the best means for meeting the identified public need?
   Yes. The proposed amendment provides flexibility for time that work needs to commence.
4. Will the proposed change result in a net benefit to the community?
   Yes. The City recognizes the importance that nonconforming uses be allowed to repair and restore if damaged or destroyed by fire or other calamity. These instances cannot be predicted and the current timeframe of 12 months is difficult to meet.

VIII. Summary Findings:

1. The Planning Commission will consider the proposed amendments and hold a public hearing on the draft regulations at their April 3, 2024 meeting.
2. Following consideration of public comment received, the Planning Commission will vote to approve the draft amendments.
3. Pursuant to RCW 36.70A.106, the draft regulations were forwarded to Commerce - Growth Management Services on March 6, 2024.
4. The proposed amendments are consistent with the procedures established in NBMC 20.08, *Comprehensive Plan and Development Regulations Amendment Procedures*. The Planning Commission finds that the proposed amendments are consistent with the criteria in NBMC 20.08.100(B) and would result in a net benefit to the community.

Staff Recommendation:
Based on the findings above and pending consideration of public input to be provided for and at the Public Hearing, staff recommends approval of the draft regulations as provided herein, attached Exhibit A.

_____ _____
Rebecca Deming, CED Director Date

Planning Commission Recommendation
DRAFT: Following consideration of the Comprehensive Plan and Development Regulation Amendment process in NBMC 20.08.070 through 20.08.110 and public comment received at the public hearing, the Planning Commission recommends approval/denial of the draft regulations as provided herein, attached Exhibit A.

_____ _____
Planning Commission Chair Date

Exhibit A – Ordinance

Exhibit B – Public Comment (If received)

Exhibit A.

Chapter 18.30

NONCONFORMING USES[1]

Sections:

18.30.040 Nonconforming use – Repair/restoration if damaged.

A nonconforming building, structure, or land use (as applicable) having been damaged or destroyed by fire or other calamity to any extent may be restored, and its immediate previous occupancy or use existing at the time of such destruction may be continued or be resumed; provided, that the necessary permits are issued and reconstruction work is commenced within ~~one year~~ *Twenty-four (24) months* of the date of such destruction; provided, that:

A. Such building, structure, or land use (as applicable) must either be located exactly in its previous footprint and envelope, or made to conform to the bulk, dimensional, and performance standards of the zoning district in which it lies;

B. Nonconforming signs (nonconforming as to use or bulk regulations) must meet existing zoning district regulations if damaged beyond 50 percent of replacement valuation of the sign, excluding the sign support structure;

C. In no case shall any prohibited uses as designated under NBMC 18.10.030 be permitted to be repaired or restored if damaged beyond 25 percent of assessed valuation. (Ord. 1256 § 1 (part), 2006: Ord. 1020 (part), 1997).

Staff Report and Planning Commission Recommendation for Updates to the Utilities of the Comprehensive Plan

Meeting Date: April 3, 2024

Proponent: City of North Bend

Staff Recommendation: A Motion to recommend City Council approval of the proposed updated Utilities Element of the Comprehensive Plan for adoption with the rest of the 2024 Comprehensive Plan Update.

I. Purpose of proposed amendments:

The City of North Bend is proposing amendments to the Utilities Element of the Comprehensive Plan. Amendments are being prepared as a part of the broader 2024 periodic update to the North Bend Comprehensive Plan, as required under RCW 36.70A.

The Utilities Element has been revised to update outdated information and reflect current status of the facilities of franchise utility providers within the City, including electricity, natural gas, solid waste, recycling, and telecommunication services. Amendments to the infrastructure/facility inventory sections of the Element have been provided based on feedback and comments from franchise utility providers. Amendments to the Utilities policies have not been proposed.

A public hearing is scheduled for the April 3, 2024 Planning Commission meeting. A clean version of the draft is attached as Exhibit A of this staff report, and a redline version, showing all amendments and comments describing changes, is attached as Exhibit B.

II. Impacts of Proposed Amendment

NBMC 20.08.070 and .080 requires that applications for Comprehensive Plan and municipal code amendments be evaluated for their environmental, economic, and cultural impacts, as well as impacts to surrounding properties. These impacts are evaluated below.

1. **Environmental Impacts**. Negative environmental impacts are not anticipated from adopting the updates to the Utilities Element. The Element is principally descriptive of franchise utility infrastructure and services to North Bend residents, and does not affect permitting requirements for such facilities and infrastructure. State Environmental Policy Act review will be conducted for the Comprehensive Plan update as a whole, which will provide opportunity for further consideration of environmental impacts of the Comprehensive Plan including this Element prior to its adoption.

2. **Economic Impacts**. The provision of franchise utility services by these providers to North Bend businesses and residents is an essential function of development and provides a positive economic impact.

3. **Cultural Impacts**. No significant cultural impacts are anticipated from the amendments. Specific future projects involving utility installation by utility providers within North Bend that are subject to City permitting requirements will be subject to cultural resource reviews as appropriate, which will plan for addressing potential cultural resource impacts. State Environmental Policy Act review will be conducted for the Comprehensive Plan which will provide opportunity for further consideration of cultural impacts of the Comprehensive Plan including this Element, prior to its adoption before the end of 2024.

4. **Impacts to Surrounding Properties**. The Elements apply City-wide and not specific to individual properties. Future projects that are located on and/or adjacent to specific properties will be subject to public notification and permitting requirements, which will include evaluation of potential impacts to such properties consistent with State Environmental Policy Act review and review against City development regulations at the time of application and review for such projects. Existing policies within the Utilities Element are provided to minimize impacts of utilities on surrounding properties, including undergrounding overhead lines, providing landscape screening, co-locating facilities, preserving vegetation, and conduit installation with roadway construction to reduce future disruptions.

III. Compatibility of Proposed Amendment with North Bend Comprehensive Plan
In accordance with NBMC 20.08.080, Comprehensive Plan and development regulation amendments must be evaluated for compliance with the Comprehensive Plan. The proposed amendments are provided consistent with Multicounty Planning Policies and requirements of the Growth Management Act to describe the general locations and capacities of utilities within the City's Utilities Element of the Comprehensive Plan.

IV. Compatibility of Proposed Amendment with the North Bend Municipal Code (NBMC)
In accordance with NBMC 20.08.080, Comprehensive Plan amendments must be evaluated for compliance with the North Bend Municipal Code. The proposed amendments are compatible with the North Bend Municipal Code and are being prepared consistent with the amendment procedures in NBMC 20.08.

V. Planning Commission Analysis:
Pursuant to NBMC 20.08.100, the Planning Commission shall consider the proposed amendment against the criteria in NBMC 20.08.100(B). A staff analysis is provided in italics under each criterion below.

1. Is the issue already adequately addressed in the Comprehensive Plan?
   The existing Utilities Element in the Comprehensive Plan dates to 2015 and needs to be updated consistent with state law (see below).
2. If the issue is not addressed in the Comprehensive Plan, is there a need for the proposed change?
   Yes. The proposed update is necessary to ensure consistency with requirements of the Growth Management Act (GMA) and Puget Sound Regional Council (PSRC), as a required component of the City's periodic major update to the Comprehensive Plan due in 2024. Consistency with the GMA and PSRC Vision 2050 is required for certification of the City's Comprehensive Plan by PSRC for eligibility for various state and federal grants, which the City may rely on to fund municipal projects.

Without such certification and use of grants, the City would need to fund a much larger share of the cost of these improvements.

3. Is the proposed change the best means for meeting the identified public need?
   Yes.
4. Will the proposed change result in a net benefit to the community?
   Yes. The amendments will provide current inventory information concerning franchise utilities and consistency with requirements for the Utilities Element.

VI. Summary Findings:

1. Pursuant to RCW 36.70A.106, the draft Elements was provided to the Department of Commerce - Growth Management Services via the Secure Access Washington portal.

2. State Environmental Policy Act Review will occur for the 2024 Comprehensive Plan updates as a whole, including this draft Utilities Element update, at a later date. SEPA Determination will be required prior to final adoption by Council of the Comprehensive Plan.

3. A public hearing was held by the Planning Commission on April 3, 2024. A notice for this Public Hearing was published in the Valley Record on August 4, 2023. Comments if received will be attached hereto as Exhibit C.

4. The proposed amendments are consistent with the procedures established in NBMC 20.08, *Comprehensive Plan and Development Regulations Amendment Procedures*.

5. The proposed amendments are consistent with and effectively carry out the policies of and requirements for the Comprehensive Plan.

CONCLUSION AND STAFF RECOMMENDATION:

Based on findings above, Staff recommends approval of the proposed amendments to the Utilities Element of the Comprehensive Plan, attached as Exhibit A.

PLANNING COMMISSION RECOMMENDATION

Based on the findings above and public comments received, the North Bend Planning Commission recommends **approval** of the proposed amendments to the Utilities Element of the Comprehensive Plan, attached as Exhibit A.

Exhibit A: Draft Utilities Element (Clean Version)
Exhibit B: Draft Utilities Element (Redline Version showing edits and comments)
Exhibit C: Written public comment (if received)

CHAPTER 5: UTILITIES ELEMENT

Contents

CHAPTER 5: UTILITIES ELEMENT

INTRODUCTION

The Growth Management Act defines electricity, gas, telecommunications, and cable as utilities. It defines water and sewer systems separately as public facilities. Plans for water supply and sewer are found as separate elements of the Comprehensive Plan. Transportation and circulation-related facilities are addressed in the transportation element. The Utilities Element has been developed in accordance with RCW 36.70A.070 of the Growth Management Act, WAC 365-195-320 (Utilities Element Requirements), and the King County Countywide Planning Policies. To fulfill the requirements set forth by the Washington Growth Management Act, the utilities element must include the following information:

1. Inventory the general location of existing utilities.
2. Establish the location of proposed utilities.
3. Examine the capacity of existing and proposed utilities.

The Utilities Element also includes an evaluation of solid waste management in North Bend, focusing on landfill capacity and recycling issues.

King County Countywide Planning Policies (CPPs) provide local direction to implement the GMA mandate for consideration of utilities needs including, but not limited to electrical, communications and natural gas. Following is a paraphrased listing of the CWPP's with direct applicability to North Bend in 2024. The policy number of each referenced policy is cited. Other CWPP's may be indirectly applicable to North Bend and the CWPP's may be revised in the future. The full list of CWPP's is available on the King County Countywide Planning Policies website at King County Countywide Planning Policies - King County, Washington

Local jurisdictions are to identify the full range of urban services required as growth occurs and how they plan to provide them, while prioritizing historically underserved areas and addressing disparities , and avoiding locating urban serving facilities in the Rural Area (PF-1, PF-17). Service providers shall manage resources efficiently through regional coordination, sharing facilities and conserving resources.

Aggressive conservation shall be implemented to address the need for adequate supply of electricity (PF-15.

Unlike the Capital Facilities Element, levels of service and concurrency requirements do not apply to private utilities. They are required by state law to provide service to anyone requesting it who has the ability to pay for the extension. The Washington Utilities Transportation Commission (WUTC) requires that privately owned utilities demonstrate that existing rate payers are not subsidizing new customers. Privately owned utilities are not public facilities although they provide a public service. They are required to provide the same level of service to urban and rural customers. The WUTC regulates utility and transportation providers to ensure safe and reliable service to customers at reasonable rates. Most of Washington State's investor-owned gas, electric, water and telecommunications are regulated by the WUTC.

In addition, due to concerns such as the security of facilities and in keeping with competition practices, the specific locations and specific market needs are not identified. Instead, general locations and general capacities are included in this element.

Financing of Utilities

The principle source of revenue for utility capital financing is charges to customers for utility services provided. Such charges include utility rate charges, other customer charges, fees, and charges for the sale of water and energy to other utilities. Revenue from customer charges is used to finance capital projects on a pay-as-you go basis or through the issuance of revenue bonds. For revenue bonds, principal and interest payments are made with revenue from utility customer charges. The State of Washington statutes permit cities to issue unlimited tax (voter-approved) general obligation debt for utility purposes up to a limit of 2.5 percent of a City's assessed valuation.

Definitions, Abbreviations, and Acronyms

- kV – kiloVolt, a unit of electric potential equal to a thousand volts
- PSE – Puget Sound Energy
- TEC – Tanner Electric Cooperative
- V – Volt, The unit for electric potential

Provision of Utility Service

This section discusses the provisions of utility service by the City and by private entities. Each utility section includes a discussion of the existing inventory, existing facility capacity, and an assessment of future facilities, although financial information for privately-owned entities is not included in this plan.

ELECTRIC SYSTEM

Description and Inventory

Electricity is provided to North Bend by Puget Sound Energy (PSE) and Tanner Electric Cooperative (TEC). PSE serves the majority of the electricity users within North Bend, with approximately 2,200 customers. PSE and TEC signed a boundary agreement to define their respective service territories in 2013. The City of North Bend and the surrounding area will continue to be served by both PSE and TEC.

PSE is a large investor-owned utility that provides electric service to customers in eight predominantly Western Washington counties: Island, King, Kitsap, Kittitas, Pierce, Skagit, Thurston and Whatcom.

Contact PSE – Municipal Liaison Manager Brandon Leyritz:
Brandon.Leyritz@pse.com
(425)-417-5925

TEC is a non-profit cooperative, or small utility, serving the electrical needs of its members. TEC serves members in the Ames Lake area of King County and Anderson Island in Pierce County in addition to its service in and around North Bend.

Contact Tanner Electric:
https://www.tannerelectric.coop
(425) 888-0623

TEC operates its own power substation just west of North Bend. The North Bend substation is a 12kV system and has a capacity of 50MVA (60MVA during winter peaks). The 115 kV transmission line serving the substation is owned by the Bonneville Power Administration and connected to the Puget Sound Energy transmission system in the Snoqualmie Ridge area. The areas served by TEC inside the city limits of North Bend are almost exclusively fed by underground circuits including the outlet mall, Forster Woods, Rock Creek Apartments and the south fork area.

The North Bend / Snoqualmie electrical sub-area is located east of Preston and between the Cedar River Watershed and the Tolt River Watershed. It includes the Fall City area, but not Carnation or Duvall. Within the sub-area, there are five hydroelectric developments. The generating plants within this area include the Snoqualmie Falls (owned by PSE), Cedar Falls (owned by Seattle City Light), and Weeks Falls, Twin Falls, and Black Creek (owned by independent power producers). Four distribution substations are located in the North Bend / Snoqualmie sub-area.

Existing Service

Distribution substations reduce voltage from 115 kV to 12 kV, which is PSE and TEC's standard distribution voltage. From the distribution substations, 12 kV feeders distribute the power to the individual customers. In residential areas, which is the predominate user in North Bend, winter outage scenarios usually determine when new distribution capacity improvements are needed.

PSE and TEC are powered by two separate substations with their own dedicated 115kV transmission lines. From these substations, each respective utility powers their individual customers via both overhead and underground distribution power lines.

BONNEVILE POWER

Puget Sound Energy and Tanner Electric are customers of Bonneville Power Administration (BPA). BPA is a federal nonprofit agency based in the Pacific Northwest. It is self-funded and covers its costs by selling its products and services. BPA markets wholesale electrical power from 31 federal hydro projects in the Columbia River Basin, one nonfederal nuclear plant and several other nonfederal power plants. The dams are operated by the U.S. Army Corps of Engineers and the Bureau of Reclamation. About 1/3 of the electric power used in the Northwest comes from BPA.

Future Demand

The forecasted load for the next 30 years will require systems improvements which are listed in this section as construction projects that are in progress, or as plans for the future. A project is considered in progress if specific site selection, preliminary engineering, permitting, or construction activities are currently underway.

New projects can be developed in the future at any time due to:

- new or replacement of existing facilities to increase capacity due to new building construction, as well as conversion of existing homes and businesses to other preferred fuel types;
- the need for replacement to facilitate improved maintenance of facilities;
- replacement or relocation of facilities due to municipal and state projects; and
- system upgrades required to accommodate third party interconnection of transmission or generation facilities.

Other system improvements may be needed within a 30 year horizon to serve forecasted load. PSE has two major substation projects planned in the 10 year horizon in the North Bend/Snoqualmie area. One near-term substation improvement project is anticipated to expand and upgrade PSE's existing North Bend substation to enable improved transmission connections. This will provide reliability improvements to customers served by the North Bend substation.

The other near-term substation improvement project is planned to expand PSE's existing Snoqualmie Switching Station to enable interconnection of a proposed small hydro project.

There are three possible long-range issues that need to be addressed in order to best serve the growth in the Snoqualmie/North Bend area:

1. Existing 115 kV transmission lines may become inadequate to serve the projected load increases in the area;
2. the lack of capacity to get power into the area when local generation may become inadequate to serve the local load; and
3. the existing substations may become insufficient to supply adequate 115-12 kV substation transformer capacity.

Construction projects in progress / Plans for the future/Recently Completed

Middle Fork Substation and 115kV Transmission Line

In 2020-2021, TEC completed the installation of a new 115kV Transmission Line through the existing utility corridor along the Snoqualmie Valley Trail. This transmission line runs to a new substation location along North Bend Way. TEC's Middle Fork Substation is to be built in 2024-2026 in order to better serve future growth on the East side of town as well as provide power supply redundancy for all TEC members.

Additional Small Hydro

There are numerous proposals for small hydroelectric generation plants in the North Bend/Snoqualmie area. Most of these are located on the North Fork of the Snoqualmie River and its tributaries, including Hancock Creek and Calligan Creek. In addition, there are possibilities for others along the Middle Fork and the South Fork of the Snoqualmie River. Puget Sound Energy may need to construct facilities to interconnect these generation plants to the electric transmission system. A possible interconnection

substation to integrate new generation would be a Reinig Switching Station located near the Snoqualmie-Cedar Falls line to connect the existing system to new generation with a new 115 kV line.

Transmission Line Rebuild
The Cedar Falls-Snoqualmie 115 kV line contains low capacity wires. At some point this line will need to be rebuilt.

Rattlesnake-Lake Tradition 230 kV Line
The Rattlesnake-Lake Tradition transmission line is a planned new 230 kV line, which would connect the existing cross-Cascades transmission line near Rattlesnake Lake southeast of North Bend to the existing Lake Tradition substation near Issaquah. This line would allow power generation in Eastern Washington to be supplied to King County as well as strengthen the power system in the North Bend area and the rest of King County.

Lantern Substation and 115 kV Transmission Line
The planned Lantern substation, located south of North Bend at a site to be determined in the future, would provide electric power to customers in the Southeast North Bend area. This would provide a possible interconnection point for existing and future transmission lines to improve reliability and capacity in the North Bend area.

Future Distribution Substations
At present, the timing of future distribution substations cannot be determined due to the uncertainty of load growth in this area, an island of urban development in a rural area. It is likely that the Snoqualmie/North Bend area may need an additional substation or an additional transformer in an existing substation after 2020.

Definitions, Abbreviations, and Acronyms

- Btu – British thermal unit, One Btu is the heat required to raise the temperature of one pound of water by one degree Fahrenheit.
- cf – Cubic feet
- Mcf –equals the volume of 1,000 cubic feet of natural gas.
- Natural Gas is a fossil fuel formed when layers of buried plants, gases, and animals are exposed to intense heat and pressure over thousands of years. The energy that the plants originally obtained from the sun is stored in the form of chemical bonds in natural gas.
- psig – pounds per square inch gauge measures a unit of pressure. Psig indicates that the pressure is relative to atmospheric pressure, opposed to psia (absolute) which is relative to a vacuum.
- PSE – Puget Sound Energy
- Therm – One therm equals 100,000 Btu, or 0.10 MMBtu.
- WUTC – Washington Utilities Transportation Commission

NATURAL GAS

Description& Inventory

Puget Sound Energy is an investor-owned natural gas utility that supplies natural gas to six Western Washington counties: Snohomish, King, Kittitas, Pierce, Thurston, and Lewis. Puget Sound Energy provides natural gas service to customers in six Western Washington counties: Snohomish, King, Kittitas, Pierce, Thurston, and Lewis.

Natural gas is not an essential service. However, PSE serves natural gas to many customers in North Bend that find that fuel essential for their space and water heat. The UTC requires PSE to maintain and serve natural gas as long as a demand remains. . Extension of service is based on request and the results of a market analysis to determine if revenues from an extension will offset the cost of construction.

Natural gas comes from gas wells in the Rocky Mountains and in Canada and is transported through interstate pipelines by Williams Northwest Pipeline to Puget Sound Energy's gate stations.

Supply mains then transport the gas from the gate stations to district regulators where the pressure is reduced to less than 60 psig. The supply mains are made of welded steel pipe that has been coated and is cathodically[1] protected to prevent corrosion. They range in size from 4" to 20".

Distribution mains are fed from the district regulators. They range in size from 1-1/4" to 8" and the pipe material typically is polyethylene (PE) or wrapped steel (STW).

Existing Service

According to the PSE rate department, the average house (using natural gas for both heat and hot water) consumes about 1,000 therms per year. Ten therms equals approximately one "mcf" (thousand cubic feet) of gas so 1,000 therms per house equals approximately 100,000 cubic feet of gas per household per year.

Individual residential service lines are fed by the distribution mains and are typically 5/8" or 1-1/8" in diameter. Individual commercial and industrial service lines are typically 1-1/4", 2" or 4" in diameter.

Future Demands

When planning the size of new gas mains, PSE uses a saturation model, which assumes all new households will use natural gas since 99% of new homes constructed where builders have the choice are using natural gas. PSE forecasts customer additions using a forecast analysis calculation based on PSE's revenue report which is generated by town tax codes established in our Exception Billings Department and based on historical customer counts.

Minimum pressure delivery through distribution pressure mains from a design standard is approximately 15 psig. If design pressures fall below 15 psig, there are several methods of increasing the pressure in the line, including:

1. Looping the distribution and/or supply lines to provide an alternative route for the gas to travel to an area needing additional supply. This method often involves construction of supply mains district regulators, and distribution mains;
2. Installing mains parallel to existing mains to supplement supply of natural gas to a particular service area; and
3. Replacing/upsizing existing pipelines to increase volume.

New projects can be developed in the future at any time due to:

1. New or replacement of existing facilities due to increase capacity requirements due to new building construction and conversion from alternate fuel;
2. Main replacement to facilitate improved maintenance of facility; and
3. Replacement or relocation of facilities due to municipal and state projects.

[1]Cathodic Protection (CP) is a technique used to control the corrosion of a metal surface by making it the cathode of an electrochemical cell.

PSE makes an effort to coordinate construction work with municipal projects in order to minimize cost and impacts to the surrounding community. Due to franchise agreements, PSE is required to relocate existing facilities.

Definitions, Abbreviations, and Acronyms

- DSL services – digital subscriber line (originally digital subscriber loop) is a family of technologies that are used to provide internet access by transmitting digital data over telephone lines.
- Optical fiber cable is a cable containing one or more optical fibers that are used to carry light. The optical fiber elements are typically individually coated with plastic layers and contained in a protective tube.
- WUTC – Washington Utilities Transportation Commission

TELECOMMUNICATION, CABLE & INTERNET

Telecommunication is a branch of technology that allows communication over a distance by transmission of electrical impulses, electromagnetic waves, or optical pulses, such as telephone, radio, television, or computer network. These services are provided by private firms and are often provided as packages.

Telephone

The local telephone service is provided by CenturyLink/Quantum Fiber, which currently serves North Bend, Fall City, Carnation and surrounding areas. The system consists of a network of copper and fiber optic cables, and other equipment facilities including central office and remote switches that support the fiber and copper infrastructure, which are located throughout the area.

To meet North Bend's future needs, CenturyLink/Quantum Fiber follows the policy of extending its lines to serve customer needs within its territory boundary in accordance with its tariffs as filed under the WUTC.

Contact Quantum Fiber: quantumfiber.com, (833) 250-6306.

Cable Broadband, Television, and Internet

Cable television service is offered through Comcast/Xfinity. Internet service is provided by both CenturyLink/Quantum Fiber and Comcast/Xfinity. CenturyLink supplies DSL services and Norstar (telephone key systems for business accounts). Comcast/Xfinity is a global media and technology company. The system consists of a combination of fiber cable and coaxial cable.

Comcast/Xfinity plans to expand its facilities to new residential subdivisions as they develop throughout the City.

SOLID WASTE & RECYCLING

The King County Comprehensive Solid Waste Management Plan guides solid waste disposal in King County. The current version of this plan was adopted in 2019. The Plan proposes strategies for managing the solid waste over the next six years, with consideration of the next 20 years. This is the first management plan that looks at ways to address climate change. The core mission of the KCCSWMP is to ensure the citizens of the county have access to safe, reliable, efficient, and affordable solid waste handling and disposal services.

Description and Inventory

North Bend, like most cities in King County, has signed an Interlocal Agreement with King County to provide solid waste planning within the City. The terms of the Solid Waste Interlocal agreement are in effect from March 19, 2013 through December 31, 2040. A number of responsibilities are designated to the County and cities in order to implement the King County Solid Waste Management Plan. The plan identifies that cities need to provide for collection of solid waste and ensure the provision of the minimum levels of collection service for recyclables and yard waste. Cities are also directed to implement requirements for new construction to accommodate recycling collection systems such as the following: a procurement policy (a policy favoring the use of recyclable products and materials), variable can rates and a monitoring program. Cities are also asked to enforce City litter control ordinances. The cities are authorized under the plan to regulate and plan for the collection of special waste, to adopt and implement the solid waste plan, and to participate in the Solid Waste Advisory Committee and Regional Policy Committee.

Existing Service

Under the Interlocal Agreement, King County is responsible for solid waste management, planning, and technical assistance to cities. North Bend is responsible for solid waste collection. Recology is under contract with North Bend for weekly solid waste and curbside recyclable collection, and for every other week, collection of yard debris/compostables for disposal/recycling, as well as for collection of public garbage and recycling from public street receptacles and at city parks and facilities and at certain City-sponsored special events.

Contact Recology: North Bend – Recology King County
(425) 448-6220.

Toxic and hazardous wastes are disposed of at facilities in South Seattle and Bellevue. Waste collected in North Bend that cannot be recycled is transported by Recology to King County's Factoria Transfer Station in Bellevue. King County then trucks the garbage to the Cedar Hills landfill; this facility received all of the mixed municipal solid waste (MMSW) generated in King County.

Future Demand

The City of North Bend and King County will continue offering service to existing and new residents meeting the standards found in the KCCSWMP. Refer to the most recent edition of King County Comprehensive Solid Waste Management Plan for additional information regarding County inventory and policy.

CEDAR HILLS LANDFILL

Cedar Hills is the only landfill still operating in King County. King County was able to extend the life of Cedar Hills from the expected closure in 2012 to 2028 (lifespan depends on a variety of factors, including tonnage received). The 2019 Solid Waste Plan recommends exploring a range of emerging technologies for future disposal other than exporting waste to a distant landfill when max capacity is reached at Cedar Hills.

Recycling

Description and Inventory

"King County and the entire Puget Sound region are recognized for successful efforts to collect recyclable waste. Continuing to reduce and reuse waste will require concerted and coordinated efforts well in the future. It is important reduce the waste stream going into area landfills. This can be done by promoting recycling practices." (2013 King County Comprehensive Solid Waste Management Plan)

North Bend is served by Recology for recycling needs. Recology serves communities throughout California, Nevada, Oregon, and Washington.Recology

Contact: North Bend – Recology King County
(425) 448-6220.

Existing Service

Under the City's contract with Recology, recycling is collected weekly as a part of garbage service collection.

Future Demand

The City of North Bend and Recology will continue offering service to existing and new residents meeting the standards found in the KCCSWMP. Refer to Recology for additional information about existing and future goals and policies.

GOALS AND POLICIES

Utility - Goal 1:Provide utilities needed to accommodate growth and development according to adopted plan policies.

Policies:

U - 1.1 Continue to serve all customers that request utility service in the service area.

U - 1.2 Maintain the integrity of the utility infrastructure system to provide service to customers as a high priority for utility capital expenditures.

U – 1.3 Work to ensure communication providers are capable of providing advanced communication services utilizing the most current technology.

Utility - Goal 2: Cooperate with utility suppliers in the development, siting, maintenance, and repair of utilities.

Policies:

U - 2.1 Provide timely and effective notice to utilities of the construction, maintenance, or repair of streets or other facilities, and coordinate such work with utilities to ensure their needs are met.

U - 2.2 Require utilities notify the City before utility work is done to discuss the best means to preserve vegetation from utility work.

U - 2.3 Review utility permits simultaneously with development proposals requesting service.

Utility - Goal 3: Work with citizens, other jurisdictions, and utility providers to ensure cooperation in the siting of utilities and to ensure that reliable and cost effective suppliers of energy are available to meet increasing demands.

Policies:

U - 3.1 Encourage the multiple use of corridors for trails, transportation right-of-way and utilities.

U - 3.2Encourage the consolidation of utility facilities and communication facilities by prohibiting duplication of electrical substations, above ground electrical transmission lines and communication antenna structures within one mile of another similar facility.

U - 3.3 Require installation of fiber optic conduit at locations approved by City Engineer when roads are built or substantially reconstructed to facilitate future construction of local area fiber optic communications networks.

Utility - Goal 4: Ensure the compatibility of and minimize the environmental impacts associated with the siting, development, and operation of utility services and facilities on adjacent properties.

Policies:

U - 4.1 Work with the utilities to eliminate existing overhead power lines in the Urban Growth Area, with an emphasis on the downtown commercial zoning district.

U - 4.2 Develop regulations for siting and landscape requirements for utility meter cabinets, terminal boxes and similar above ground utility features.

U - 4.3 Where feasible, require installation of new power and communication lines to be placed underground.

Utility - Goal 5: Promote conservation through cooperative efforts of regulations, programs, and educational literature.

Policies:

U - 5.1 Work with the County and utility suppliers to develop public education and information materials that promote conservation.

U - 5.2 Handle and dispose of solid waste in ways that minimize pollution and protects the public health.

U - 5.3 Work with the City's solid waste collection agencies to establish cost-effective policies and regulations designed to minimize waste generation and meet King County's adopted waste reduction goals.

U - 5.4 Encourage utility providers to convert to cost effective and environmentally compatible alternative technology and energy sources.

U - 5.5 Require the provision of recycling opportunities in new construction projects.

U - 5.6 Encourage utility providers to develop outage reduction plans, develop initiatives to lower energy costs, create clean power sources and reduce greenhouse gas emissions.

APPENDIX A:

Definitions, Abbreviations, and Acronyms

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- cf – Cubic feet
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- KCCSWMP – King County Comprehensive Solid Waste Management Plan prepared by the Solid Waste Division of the Department of Natural Resources and Parks in accordance with Washington State law. It presents proposed strategies for managing King County's solid waste over the next 6 years with consideration of the next 20
- kV – kiloVolt, a unit of electric potential equal to a thousand volts
- Mcf –equals the volume of 1,000 cubic feet of natural gas.
- Natural Gas is a fossil fuel formed when layers of buried plants, gases, and animals are exposed to intense heat and pressure over thousands of years. The energy that the plants originally obtained from the sun is stored in the form of chemical bonds in natural gas.
- Optical fiber cable is a cable containing one or more optical fibers that are used to carry light. The optical fiber elements are typically individually coated with plastic layers and contained in a protective tube.
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- psig – pounds per square inch gauge measures a unit of pressure. Psig indicates that the pressure is relative to atmospheric pressure, opposed to psia (absolute) which is relative to a vacuum.
- TEC – Tanner Electric Cooperative
- Therm – One therm equals 100,000 Btu, or 0.10 MMBtu.
- V – Volt, The unit for electric potential
- WUTC – Washington Utilities Transportation Commission

CHAPTER 5: UTILITIES ELEMENT

Contents

CHAPTER 5: UTILITIES ELEMENT

INTRODUCTION

The Growth Management Act defines electricity, gas, telecommunications, and cable as utilities. It defines water and sewer systems separately as public facilities. Plans for water supply and sewer are found as separate elements of the Comprehensive Plan. Transportation and circulation-related facilities are addressed in the transportation element. The Utilities Element has been developed in accordance with RCW 36.70A.070 of the Growth Management Act, WAC 365-195-320 (Utilities Element Requirements), and the King County Countywide Planning Policies. To fulfill the requirements set forth by the Washington Growth Management Act, the utilities element must include the following information:

1. Inventory the general location of existing utilities.
2. Establish the location of proposed utilities.
3. Examine the capacity of existing and proposed utilities.

The Utilities Element also includes an evaluation of solid waste management in North Bend, focusing on landfill capacity and recycling issues.

King County Countywide Planning Policies (CPPs) provide local direction to implement the GMA mandate for consideration of utilities needs including, but not limited to electrical, communications and natural gas. Following is a paraphrased listing of the CWPP's with direct applicability to North Bend in ~~2014~~2024. The policy number of each referenced policy is cited. Other CWPP's may be indirectly applicable to North Bend and the CWPP's may be revised in the future. The full list of CWPP's is available on the King County ~~DDES~~ Countywide Planning Policies website at ~~http://www.metrokc.gov/ddes/compplan/CPP_current.pdf~~King County Countywide Planning Policies - King County, Washington

Local jurisdictions are to identify the full range of urban services required as growth occurs and how they plan to provide them, while prioritizing historically underserved areas and addressing disparities ~~(CO-1)~~, and avoiding locating urban serving facilities in the Rural Area (PF-1, PF-17). Service providers shall manage resources efficiently through regional coordination, sharing facilities and conserving resources

~~(CO-2 and CO-3)~~. Aggressive conservation shall be implemented to address the need for adequate supply of electricity (PF-15~~CO-6)~~.

Unlike the Capital Facilities Element, levels of service and concurrency requirements do not apply to private utilities. They are required by state law to provide service to anyone requesting it who has the ability to pay for the extension. The Washington Utilities Transportation Commission (WUTC) requires that privately owned utilities demonstrate that existing rate payers are not subsidizing new customers. Privately owned utilities are not public facilities although they provide a public service. They are required to provide the same level of service to urban and rural customers. The WUTC regulates utility and transportation providers to ensure safe and reliable service to customers at reasonable rates. Most of Washington State's investor-owned gas, electric, water and telecommunications are regulated by the WUTC.

In addition, due to concerns such as the security of facilities and in keeping with competition practices, the specific locations and specific market needs are not identified. Instead, general locations and general capacities are included in this element.

Financing of Utilities

The principle source of revenue for utility capital financing is charges to customers for utility services provided. Such charges include utility rate charges, other customer charges, fees, and charges for the sale of water and energy to other utilities. Revenue from customer charges is used to finance capital projects on a pay-as-you go basis or through the issuance of revenue bonds. For revenue bonds, principal and interest payments are made with revenue from utility customer charges. The State of Washington statutes permit cities to issue unlimited tax (voter-approved) general obligation debt for utility purposes up to a limit of 2.5 percent of a City's assessed valuation.

Definitions, Abbreviations, and Acronyms

- kV – kiloVolt, a unit of electric potential equal to a thousand volts
- PSE – Puget Sound Energy
- TEC – Tanner Electric Cooperative
- V – Volt, The unit for electric potential

Provision of Utility Service

This section discusses the provisions of utility service by the City and by private entities. Each utility section includes a discussion of the existing inventory, existing facility capacity, and an assessment of future facilities, although financial information for privately-owned entities is not included in this plan.

ELECTRIC SYSTEM

Description and Inventory

Electricity is provided to North Bend by Puget Sound Energy (PSE) and Tanner Electric Cooperative (TEC). ~~Puget Sound Energy (~~PSE~~)~~ serves the majority of the electricity users within North Bend, with approximately 2,200 customers. ~~Tanner Electric Cooperative and Puget Sound Energy~~ PSE and TEC signed a boundary agreement to define their respective service territories in 2013. The City of North Bend and the surrounding area will continue to be served by both PSE and ~~Tanner Electric Cooperative~~TEC.

Draft update 3-20-2024 – Redline Version

~~Puget Sound Energy~~ PSE is a large investor-owned utility that provides electric service to ~~more than 1.1 million~~ customers in eight predominantly Western Washington counties: Island, King, Kitsap, Kittitas, Pierce, Skagit, Thurston and Whatcom.

Contact PSE – Municipal Liaison Manager Brandon Leyritz:
Brandon.Leyritz@pse.com
(425)-417-5925

~~Tanner Electric Cooperative~~ TEC is a non-profit cooperative, or small utility, serving the electrical needs of its members. ~~Tanner Electric~~TEC serves members in the Ames Lake area of King County and Anderson Island in Pierce County in addition to its service in and around North Bend. ~~In 2014 Tanner Electric served 4,638 meters overall and 2,037 in and around North Bend. Tanner Electric was formed in 1936 to serve areas deemed not to be economically feasible by the private (for profit) power company. Over the years other areas took advantage of the cooperatives form of business and services and facilities were expanded.~~

~~The North Bend/Snoqualmie area includes several hydroelectric generating plants owned by PSE and other power producers: Snoqualmie Falls (PSE), Cedar Falls (Seattle City Light), and Weeks Falls, Twin Falls and Black Creek (owned by Independent Power Producers).~~

Contact Tanner Electric:
https://www.tannerelectric.coop
(425) 888-0623

~~In 2002 Tanner Electric built~~TEC operates its own power substation just west of North Bend ~~on Alm Way~~. The North Bend substation is a 12kV system and has a capacity of 50~~25~~MVA (60~~33~~MVA during winter peaks). ~~The Tanner Electric load for 2014 is over 13MW.~~ The 115 kV transmission line serving the substation is owned by the Bonneville Power Administration and connected to the Puget Sound Energy transmission system in the Snoqualmie Ridge area. The areas served by ~~Tanner Electric~~TEC inside the city limits of North Bend are almost exclusively fed by underground circuits including the ~~Factory Outlets~~outlet mall, Forster Woods, Rock Creek Apartments and the south fork area.

The North Bend / Snoqualmie electrical sub-area is located east of Preston and between the Cedar River Watershed and the Tolt River Watershed. It includes the Fall City area, but not Carnation or Duvall. Within the sub-area, there are five hydroelectric developments. The generating plants within this area include the Snoqualmie Falls (owned by PSE), Cedar Falls (owned by Seattle City Light), and Weeks Falls, Twin Falls, and Black Creek (owned by independent power producers). Four distribution substations are located in the North Bend / Snoqualmie sub-area.

BONNEVILE POWER

Puget Sound Energy and Tanner Electric are~~is a~~ customers of Bonneville Power Administration (BPA). BPA is a federal nonprofit agency based in the Pacif Northwest. It is self-funded and covers its costs by sel its products and services. BPA markets wholesale electrical power from 31 federal hydro projects in the Columbia River Basin, one nonfederal nuclear plant and several other nonfederal power plants. The dams are operated by the U.S. Army Corps of Engineers and the Bureau of Reclamation. About 1/3 of the electric power used in the Northwest comes from BPA.

Commented [MM1]: Deleting extraneous information that becomes out-dated.

Commented [MM2]: Duplicative of paragraph on NB/Snoqualmie electrical sub-area below.

SNOQUALMIE FALLS HYDROELECTRIC PROJECT

Puget Snoqualmie Falls Hydroelectric Project is one of the oldest hydropower plants in the United States. The project contains a small diversion structure just upstream from the falls, and two powerhouses. Built in 1898-99, the first powerhouse is encased in bedrock 260 feet beneath the surface and was the world's first underground power plant. The second powerhouse was built in 1910 and is a quarter-mile downstream from the falls. The two powerhouses combined have 54 megawatts of generating capacity (enough to meet the peak electricity needs of about 25,000 households). (https://pse.com/inyourcommunity/king/PagesSnoqualmie Resolution 1677, Exhibit A Falls.aspx)

Existing Service

Distribution substations reduce voltage from 115 kV to 12 kV, which is Puget Sound EnergyPSE and TEC's standard distribution voltage. From the distribution substations, The 12 kV feeders distribute the power from these distribution substations to the individual customers. In residential areas, which is the predominate user in North Bend, winter outage scenarios usually determine when new distribution capacity improvements are needed.

PSE and TEC are powered by two separate substations with their own dedicated 115kV transmission lines. From these substations, each respective utility powers their individual customers via both overhead and underground distribution power lines.

A 115 kV transmission switching station (Snoqualmie Switch substation) is located adjacent to Snoqualmie Falls. This substation is considered a hub because it integrates the Snoqualmie Falls electric generation into the power system as well as providing an interconnection point for the power system. Two existing transmission lines connect to the Snoqualmie Falls generation complex; one line extends north to Fall City, one line extends south to North Bend continuing south to the Covington area, one line extends west to the Lake Tradition substation in Issaquah, and one line extends west to the Mount Si substation in Snoqualmie.

The Mount Si Substation was built at Snoqualmie Ridge in 2012. It provides both distribution capacity and a connection point for the three transmission lines that intersect at that location. The substation provides improved reliability for PSE's customers in Snoqualmie and North Bend as well as Tanner's North Bend customers.

There are two additional distribution substations (Snoqualmie and North Bend substations) which serve the North Bend area. From these two substations there are six distribution circuits serving the customers in the City of North Bend.

Commented [MM3]: Recommendation to not include this specific information on the feeds and relative importance of the specific substations for security to help prevent attacks on critical infrastructure.

Future Demand

The forecasted load for the next 30 years will require systems improvements which are listed in this section as construction projects that are in progress, or as plans for the future. A project is considered in progress if specific site selection, preliminary engineering, permitting, or construction activities are currently underway.

New projects can be developed in the future at any time due to:

- new or replacement of existing facilities to increase capacity due to new building construction, as well as conversion of existing homes and businesses to other preferred fuel types (most typically from heating oil to natural gas);
- the need for replacement to facilitate improved maintenance of facilities;
- replacement or relocation of facilities due to municipal and state projects; and

- system upgrades required to accommodate third party interconnection of transmission or generation facilities.

Other system improvements may be needed within a 30 year horizon to serve forecasted load. PSE has two major substation projects planned in the 10 year horizon in the North Bend/Snoqualmie area. One near-term substation improvement project is anticipated to expand and upgrade PSE's existing North Bend substation to enable improved transmission connections. This will provide reliability improvements to customers served by the North Bend substation.

The other near-term substation improvement project is planned to expand PSE's existing Snoqualmie Switching Station to enable interconnection of a proposed small hydro project.

There are three possible long-range issues that need to be addressed in order to best serve the growth in the Snoqualmie/North Bend area:

1. ~~the e~~Existing ~~Cedar Falls-Snoqualmie~~ 115 kV transmission line~~s~~ may become inadequate to serve the projected load increases in the area;
2. the lack of capacity to get power into the area when local generation may become inadequate to serve the local load; and
3. the existing substations may become insufficient to supply adequate 115-12 kV substation transformer capacity.

Construction projects in progress / Plans for the future/Recently Completed

~~*Tanner Substation and 115kV Transmission Line*~~

~~Tanner recently completed the construction of Tanner substation. In order to operate the substation, BPA built a transmission line tap (extension) from the existing Snoqualmie-Lake Tradition line #1 to the substation. The line is connected from the Mt. Si Substation to the Tanner substation. In the near future, the line will be extended to the new Middle Fork substation.~~

Middle Fork Substation and 115kV Transmission Line

In 2020-2021, TEC completed the installation of a new 115kV Transmission Line through the existing utility corridor along the Snoqualmie Valley Trail. This transmission line runs to a new substation location along North Bend Way. TEC's Middle Fork Substation is to be built in 2024-2026 in order to better serve future growth on the East side of town as well as provide power supply redundancy for all TEC members.

Additional Small Hydro

There are numerous proposals for small hydroelectric generation plants in the North Bend/Snoqualmie area. Most of these are located on the North Fork of the Snoqualmie River and its tributaries, including Hancock Creek and Calligan Creek. In addition, there are possibilities for others along the Middle Fork and the South Fork of the Snoqualmie River. Puget Sound Energy may need to construct facilities to interconnect these generation plants to the electric transmission system. A possible interconnection substation to integrate new generation would be a Reinig Switching Station located near the Snoqualmie-Cedar Falls line to connect the existing system to new generation with a new 115 kV line.

Transmission Line Rebuild

The Cedar Falls-Snoqualmie 115 kV line contains low capacity wires. At some point this line will need to be rebuilt.

Rattlesnake-Lake Tradition 230 kV Line

The Rattlesnake-Lake Tradition transmission line is a planned new 230 kV line, which would connect the existing cross-Cascades transmission line near Rattlesnake Lake southeast of North Bend to the existing Lake Tradition substation near Issaquah. This line would allow power generation in Eastern Washington to be supplied to King County as well as strengthen the power system in the North Bend area and the rest of King County.

Lantern Substation and 115 kV Transmission Line
The planned Lantern substation, located south of North Bend at a site to be determined in the future, would provide electric power to customers in the Southeast North Bend area. This would provide a possible interconnection point for existing and future transmission lines to improve reliability and capacity in the North Bend area.

Future Distribution Substations
At present, the timing of future distribution substations cannot be determined due to the uncertainty of load growth in this area, an island of urban development in a rural area. It is likely that the Snoqualmie/North Bend area may need an additional substation or an additional transformer in an existing substation after 2020.

Definitions, Abbreviations, and Acronyms

- Btu – British thermal unit, One Btu is the heat required to raise the temperature of one pound of water by one degree Fahrenheit.
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- Therm – One therm equals 100,000 Btu, or 0.10 MMBtu.
- WUTC – Washington Utilities Transportation Commission

NATURAL GAS

Description& Inventory

Puget Sound Energy is an investor-owned natural gas utility that supplies natural gas to six Western Washington counties: Snohomish, King, Kittitas, Pierce, Thurston, and Lewis. Puget Sound Energy provides natural gas service to ~~more than 750,000~~ customers in six Western Washington counties: Snohomish, King, Kittitas, Pierce, Thurston, and Lewis. ~~It is estimated that PSE currently serves over 2,800 customers within the City of North Bend.~~

Natural gas is not an essential service.~~,~~ ~~h~~However, PSE serves natural gas to many customers in North Bend that find that fuel essential for their space and water heat. The UTC requires PSE to maintain and serve natural gas as long as a demand remains. ~~and, therefore, is not mandated to serve~~. Extension of service is based on request and the results of a market analysis to determine if revenues from an extension will offset the cost of construction.

Natural gas comes from gas wells in the Rocky Mountains and in Canada and is transported through interstate pipelines by Williams Northwest Pipeline to Puget Sound Energy's gate stations.

Supply mains then transport the gas from the gate stations to district regulators where the pressure is reduced to less than 60 psig. The supply mains are made of welded steel pipe that has been coated and is cathodically[1] protected to prevent corrosion. They range in size from 4" to 20".

Distribution mains are fed from the district regulators. They range in size from 1-1/4" to 8" and the pipe material typically is polyethylene (PE) or wrapped steel (STW).

Existing Service

According to the PSE rate department, the average house (using natural gas for both heat and hot water) consumes about 1,000 therms per year. Ten therms equals approximately one "mcf" (thousand cubic feet) of gas so 1,000 therms per house equals approximately 100,000 cubic feet of gas per household per year.

Individual residential service lines are fed by the distribution mains and are typically 5/8" or 1-1/8" in diameter. Individual commercial and industrial service lines are typically 1-1/4", 2" or 4" in diameter.

Future Demands

When planning the size of new gas mains, PSE uses a saturation model, which assumes all new households will use natural gas since 99% of new homes constructed where builders have the choice are using natural gas. PSE forecasts customer additions using a forecast analysis calculation based on PSE's revenue report which is generated by town tax codes established in our Exception Billings Department and based on historical customer counts.

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[1] Cathodic Protection (CP) is a technique used to control the corrosion of a metal surface by making it the cathode of an electrochemical cell.

~~Due to the growing popularity of natural gas in the North Bend and surrounding areas, PSE will continually evaluate the necessity of the above projects and alternatives. Changes in project route, construction schedule and detail could occur as they are dependent on budgets and WUTC cooperation.~~

TELECOMMUNICATION, CABLE & INTERNET

Telecommunication is a branch of technology that allows communication over a distance by transmission of electrical impulses, electromagnetic waves, or optical pulses, such as telephone, radio, television, or computer network. These services are provided by private firms and are often provided as packages.

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Cable television service is offered through Comcast/Xfinity. Internet service is provided by both CenturyLink/Quantum Fiber and Comcast/Xfinity. CenturyLink supplies DSL services and Norstar (telephone key systems for business accounts). Comcast/Xfinity is a global media and technology company ~~as well as the nation's largest video, high-speed Internet and phone provider to residential customers~~. The system consists of a combination of fiber cable and coaxial cable.

Comcast/~~-~~Xfinity plans to expand its facilities to new residential subdivisions as they develop throughout the City. ~~Comcast is committed to evolving advanced broadband services to meet the future needs and desires of our cable customers. These advanced services include more digital and high-definition television signals, interactive television like Video on Demand and Digital Video Recorders that allow customers to watch what they want in the timeframe that is best for their schedules, and faster Internet speeds.~~

> ***Definitions, Abbreviations, and Acronyms***
>
> - KCCSWMP – King County Comprehensive Solid Waste Management Plan prepared by the Solid Waste Division of the Department of Natural Resources and Parks in accordance with Washington State law. ~~It presents proposed strategies for managing King County's solid waste over the next 6 years with consideration of the next 20~~

SOLID WASTE & RECYCLING

The ~~2013~~ King County Comprehensive Solid Waste Management Plan[2] guides solid waste disposal in King County. The current version of this plan was adopted in 2019. The ~~Management~~ Plan proposes strategies for managing the solid waste over the next six years, with consideration of the next 20 years. This is the first management plan that looks at ways to address climate change. The core mission of the KCCSWMP is to ensure the citizens of the county have access to safe, reliable, efficient, and affordable solid waste handling and disposal services.

Description and Inventory

North Bend, like most cities in King County, has signed an Interlocal Agreement with King County to provide solid waste planning within the City. The terms of the Solid Waste Interlocal agreement are in effect from March 19, 2013 through December 31, 2040. A number of responsibilities are designated to the County and cities in order to implement the King County Solid Waste Management Plan. The plan identifies that cities need to provide for collection of solid waste and ensure the provision of the minimum levels of collection service for recyclables and yard waste. Cities are also directed to implement requirements for new construction to accommodate recycling collection systems such as the following: a procurement policy (a policy favoring the use of ~~recycles products and~~ recyclable products and materials), variable can rates and a monitoring program. Cities are also asked to enforce City litter control ordinances. The cities are authorized under the plan to regulate and plan for the collection of special waste, to adopt and implement the solid waste plan, and to participate in the Solid Waste Advisory Committee and Regional Policy Committee.

Existing Service

Under the Interlocal Agreement, King County is responsible for solid waste management, planning, and technical assistance to cities. North Bend is responsible for solid waste collection. ~~Republic Services~~Recology is under contract with North Bend for weekly solid waste and curbside recyclable collection, and for every other week, collection of yard debris/compostables for~~and~~ disposal/recycling, as well as for collection of public garbage and recycling from public street receptacles and at city parks and facilities and at certain City-sponsored special events.

Contact Recology: North Bend – Recology King County
(425) 448-6220.

Toxic and hazardous wastes are disposed of at facilities in South Seattle and Bellevue. Waste collected in North Bend that cannot be recycled is transported by ~~Republic Services~~Recology to King County's Factoria Transfer Station in Bellevue ~~or to their own Transfer Station in Seattle~~. King County ~~and Republic Services~~ then trucks the garbage to the Cedar Hills landfill; this facility received all of the mixed municipal solid waste (MMSW) generated in King County.

[2] ~~At the time of this publishing the 2013 King County Comprehensive Solid Waste Management Plan is in the process of being updated.~~

CEDAR HILLS LANDFILL

Cedar Hills is the only landfill still operating in King County. King County was able to extend the life of Cedar Hills from the expected closure in 2012 to ~~2025~~ 2028 (lifespan depends on a variety of factors, including tonnage received). The ~~2013~~ 2019 Solid Waste Plan recommends exploring a range of emerging technologies for future disposal other than exporting waste to a distant landfill when max capacity is reached at Cedar Hills. ~~In 2009 Cedar Hills began operating a gas-to-energy process that burns gas created by the decomposition of waste into pipeline quality gas for the energy market. Bio Energy (Washington) LLC, owner and operator of this facility, has determined that the annual reduction in environmentally harmful carbon dioxide is the equivalent to 22,000 average passenger cars. The facility was generating enough energy to heat approximately 30,000 homes and sales of gas were expected to generate more than $1 million annually for the division. This will help fund future green disposal of waste in King County. (2013 King County Comprehensive Solid Waste Management Plan)~~

Future Demand

The City of North Bend and King County will continue offering service to existing and new residents meeting the standards found in the KCCSWMP. Refer to the most recent edition of King County Comprehensive Solid Waste Management Plan for additional information regarding County inventory and policy.

RECYCLING

Description and Inventory

"King County and the entire Puget Sound region are recognized for successful efforts to collect recyclable waste. Continuing to reduce and reuse waste will require concerted and coordinated efforts well in the future. It is important reduce the waste stream going into area landfills. This can be done by promoting recycling practices." (2013 King County Comprehensive Solid Waste Management Plan)

North Bend is served by ~~Republic Services~~Recology for recycling needs. ~~Republic Services is an American company that was incorporated in 1998. Through a series of mergers and acquisitions, they became one of the largest waste and recycling companies in the United States. Republic Services serves 1,595 residential customers and 389 commercial customers in the City of North Bend. In 2013 Republic Services processed 1,053 tons of recycling repurposed into new products and converted 760 tons of organic waste to compost.~~ Recology serves communities throughout California, Nevada, Oregon, and Washington.

Recology Contact: North Bend – Recology King County (425) 448-6220.

~~In addition, in an effort to reduce wastes, Republic Services implements a variety of public education programs. These programs include distributing flyers and brochures on reducing waste as well as monitoring garbage in order to advise customers on what can be recycled.~~

Existing Service

~~Refer to Figure 1: Existing Facility Service for Republic Service's synopsis of the year 2013 and services provided.~~ Under the City's contract with Recology, recycling is collected weekly as a part of garbage service collection.

Future Demand

The City of North Bend and ~~Republic Services~~Recology will continue offering service to existing and new residents meeting the standards found in the KCCSWMP. Refer to ~~Republic Services~~Recology for additional information about existing and future goals and policies.

GOALS AND POLICIES

Utility - Goal 1:Provide utilities needed to accommodate growth and development according to adopted plan policies.

Policies:

U - 1.1 Continue to serve all customers that request utility service in the service area.

U - 1.2 Maintain the integrity of the utility infrastructure system to provide service to customers as a high priority for utility capital expenditures.

U – 1.3 Work to ensure communication providers are capable of providing advanced communication services utilizing the most current technology.

Utility - Goal 2: Cooperate with utility suppliers in the development, siting, maintenance, and repair of utilities.

Policies:

U - 2.1 Provide timely and effective notice to utilities of the construction, maintenance, or repair of streets or other facilities, and coordinate such work with utilities to ensure their needs are met.

U - 2.2 Require utilities notify the City before utility work is done to discuss the best means to preserve vegetation from utility work.

U - 2.3 Review utility permits simultaneously with development proposals requesting service.

Utility - Goal 3: Work with citizens, other jurisdictions, and utility providers to ensure cooperation in the siting of utilities and to ensure that reliable and cost effective suppliers of energy are available to meet increasing demands.

Policies:

U - 3.1 Encourage the multiple use of corridors for trails, transportation right-of-way and utilities.

U - 3.2 Encourage the consolidation of utility facilities and communication facilities by prohibiting duplication of electrical substations, above ground electrical transmission lines and communication antenna structures within one mile of another similar facility.

U - 3.3 Require installation of fiber optic conduit at locations approved by City Engineer when roads are built or substantially reconstructed to facilitate future construction of local area fiber optic communications networks.

Utility - Goal 4: Ensure the compatibility of and minimize the environmental impacts associated with the siting, development, and operation of utility services and facilities on adjacent properties.

Policies:

U - 4.1 Work with the utilities to eliminate existing overhead power lines in the Urban Growth Area, with an emphasis on the downtown commercial zoning district.

U - 4.2 Develop regulations for siting and landscape requirements for utility meter cabinets, terminal boxes and similar above ground utility features.

U - 4.3 Where feasible, require installation of new power and communication lines to be placed underground.

Utility - Goal 5: Promote conservation through cooperative efforts of regulations, programs, and educational literature.

Policies:

U - 5.1 Work with the County and utility suppliers to develop public education and information materials that promote conservation.

U - 5.2 Handle and dispose of solid waste in ways that minimize pollution and protects the public health.

U - 5.3 Work with the City's solid waste collection agencies to establish cost-effective policies and regulations designed to minimize waste generation and meet King County's adopted waste reduction goals.

U - 5.4 Encourage utility providers to convert to cost effective and environmentally compatible alternative technology and energy sources.

U - 5.5 Require the provision of recycling opportunities in new construction projects.

U - 5.6 Encourage utility providers to develop outage reduction plans, develop initiatives to lower energy costs, create clean power sources and reduce greenhouse gas emissions.

APPENDIX A:

Definitions, Abbreviations, and Acronyms

- Btu – British thermal unit, One Btu is the heat required to raise the temperature of one pound of water by one degree Fahrenheit.
- cf – Cubic feet
- DSL services – digital subscriber line (originally digital subscriber loop) is a family of technologies that are used to provide internet access by transmitting digital data over telephone lines.
- KCCSWMP – King County Comprehensive Solid Waste Management Plan prepared by the Solid Waste Division of the Department of Natural Resources and Parks in accordance with Washington State law. It presents proposed strategies for managing King County's solid waste over the next 6 years with consideration of the next 20
- kV – kiloVolt, a unit of electric potential equal to a thousand volts
- Mcf –equals the volume of 1,000 cubic feet of natural gas.
- Natural Gas is a fossil fuel formed when layers of buried plants, gases, and animals are exposed to intense heat and pressure over thousands of years. The energy that the plants originally obtained from the sun is stored in the form of chemical bonds in natural gas.
- Optical fiber cable is a cable containing one or more optical fibers that are used to carry light. The optical fiber elements are typically individually coated with plastic layers and contained in a protective tube.
- PSE – Puget Sound Energy
- psig – pounds per square inch gauge measures a unit of pressure. Psig indicates that the pressure is relative to atmospheric pressure, opposed to psia (absolute) which is relative to a vacuum.
- TEC – Tanner Electric Cooperative
- Therm – One therm equals 100,000 Btu, or 0.10 MMBtu.
- V – Volt, The unit for electric potential
- WUTC – Washington Utilities Transportation Commission