

# Our **Energy Storage** Business



# A Promising Future For Energy Storage

## Technology offers flexibility, value in today's energy market

Meeting today's energy challenges is complicated. The power infrastructure must be able to balance supply and demand instantaneously while taking into account the impacts of intermittent renewable energy. Consumers are also looking for energy services and products that provide flexibility and value in the areas of renewable energy, grid reliability and peaking power.

NextEra Energy Resources is helping meet these needs through battery energy storage technology, which is providing a promising way to store electrical energy so it can be available to meet demand whenever needed. While there are many energy storage technologies, NextEra Energy Resources has focused on the use of batteries as costs have declined, but is continuing to evaluate other storage technologies.

**“(Our) company expects to invest more than \$1 billion in storage in 2021, which would be the largest-ever annual battery storage investment by any power company in history.”**

*Jim Robo, Chairman and CEO, NextEra Energy,  
April 22, 2020*

## Energy storage delivers advantages to the power grid and our customers

What makes energy storage attractive is that it allows energy to be delivered instantly, in the required amount. By doing this, energy storage provides many advantages, such as improving the operation of the electrical grid, integrating renewable resources and helping investment decisions.

- » **Grid enhancement.** Energy storage can balance load on the power system grid by moving energy when demands are low to times when demands are high. The technology also allows for a seamless switch between power sources and protects equipment by controlling voltage and frequency.
- » **Renewable resources.** Energy storage fills in the gaps resulting from intermittent resources like wind and solar generation. That means operators can more easily bring on and off renewable energy, reducing the need for load balancing services and rapid generation ramping.
- » **Electrical system investments.** By reducing the load on congested transmission and distribution systems, energy storage may defer expensive upgrades. In some cases, storage may also reduce new investment in conventional resources, such as adding generating plants to meet systemwide peak load.



In 2018, NextEra Energy Resources' 20-megawatt (MW) Pinal Central Solar Energy Center in Arizona became the company's first project to pair solar energy with an on-site, state-of-the-art 10-MW battery storage system (shown in cover photo, lower right, February 2020). More than 50% of the company's new solar projects in 2019 also included a storage component. Renewable energy projects, coupled with battery storage, provide power to customers long after the sun goes down and demand for electricity goes up.



NextEra Energy Resources employees at the 16.2-MW Casco Bay Energy Storage Facility in Maine (April 2017). The company is developing additional energy storage facilities across North America.

## Projects require little land, provide many benefits

Energy storage projects do not require a large area for development, are scalable in size and can be located in many places. NextEra Energy Resources generally seeks to site a project as close as possible to existing electrical transmission or distribution infrastructure and often, close to an existing renewable project.

Other benefits of energy storage include no greenhouse gases or other air pollutants, no use of water to generate electricity, and a renewable supply of energy.

## Interest in energy storage is growing

The growing interest in energy storage is being driven by a number of factors, including:

- » Reductions in technology costs.
- » The rapid development of intermittent renewable energy resources.
- » The evaluation of new policy initiatives by states.
- » Regulatory changes.

For example, the Federal Energy Regulatory Commission has mandated policy changes in the frequency regulation market that have helped spur the use of energy storage for this purpose. Certain markets are now encouraging utilities to use energy storage to manage the intermittent energy that flows into the grid and to supply the grid with energy during times of peak use.

## Costs are expected to decline

While emerging technology costs tend to be higher and therefore less competitive during the early evolution phase, technological efficiencies, improved manufacturing productivity and economies of scale help lower cost over time. As batteries gain wider industry adoption, prices are expected to decrease further.

## Energy storage is safe, reliable

Safety is always a top priority in NextEra Energy Resources' operations, and energy storage systems are no exception.

Our energy storage systems are safe and reliable. Overall, energy storage has been a part of the U.S. electric system since the 1930s. Today, it makes up approximately 2% of the nation's generation capacity, according to the Energy Storage Association. The safety record of the industry is similar to or better than other forms of power generation or distribution.

## NextEra Energy Resources is experienced in energy storage

Our team of specialists has spent years researching energy storage technologies, applications and use cases, leading to two demonstration projects in 2012 and 2013.

Today, NextEra Energy Resources has more than 145 MW of operational energy storage, including the Lee DeKalb Energy Storage Facility in Illinois and the Blue Summit Energy Storage Facility in Texas. These facilities are being used for frequency regulation. Traditionally, fossil and hydroelectric power plants have been used for frequency regulation. Now, batteries can also accomplish this task more efficiently.

In addition to the growth of operational facilities, the company has a robust pipeline of development projects across the U.S. and Canada.



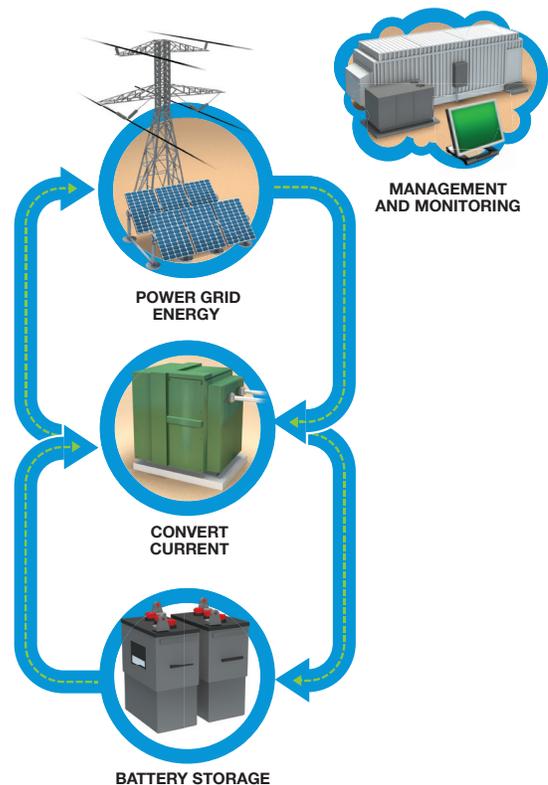
Batteries are placed into removable racks similar to a computer server. There are also monitoring, control and power conversion systems, as well as cooling and fire suppression systems.



NextEra Energy Resources' Minuteman Energy Storage Facility in Massachusetts went into service in 2019. It provides 5 MW of energy storage.

### How energy storage systems work

- » A battery management system monitors the individual cells and controls the voltage, temperature and current for safe, reliable transfer of energy. The system automatically shuts off if the batteries are operating outside of predefined parameters.
- » A computerized monitoring system provides up-to-date weather forecasts, power prices, historical electrical use, the amount of charge remaining in the batteries and when to use the energy storage system.
- » Energy from the power grid or from renewable energy sources is delivered via a bidirectional inverter, which converts the energy from alternating current (AC) into direct current (DC). Today's batteries can only store DC. This energy goes into an array of batteries that is typically housed within a battery container or a building structure.
- » When the energy is needed on the power system, the inverters are then used again, but this time to convert the DC from the batteries into AC. Once the power has been transformed, it is stepped up in voltage and subsequently sent to an on-site substation or directly to a distribution or transmission line.
- » The electricity is then distributed to homes, schools, businesses and other consumers.



## NextEra Energy Resources has a proven reputation for excellence

As the world's largest generator of renewable energy from the wind and the sun, NextEra Energy Resources has earned a reputation for excellence. Our scale, size and scope of services allow us to offer innovative energy solutions to customers, and energy storage is a natural extension of our development business.

By working with NextEra Energy Resources, customers can realize the monetary benefits of energy storage while mitigating technology complexity and vendor risk. With our significant purchasing power, we can buy energy storage equipment at the lowest possible costs. With our best-in-class development skills, we can also build customized storage solutions to meet customers' unique requirements.

Energy storage has the potential to be a game changer for the energy industry, and NextEra Energy Resources is a leader in the market.

[NextEraEnergyResources.com](http://NextEraEnergyResources.com)

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December 28, 2020

Mr. Mark Personius  
Director, Planning and Development Services  
Whatcom County  
5280 Northwest Drive  
Bellingham, WA 98226

**Subject: NextEra Resources Development, LLC  
Development Regulation Amendment Application  
Battery Energy Storage Systems**

Mr. Personius:

On behalf of NextEra Resources Development, LLC, we respectfully submit the attached Development Regulation Amendment Application to request the County consider text amendments to the Whatcom County Code Title 20 (Zoning) including the Rural Zoning District WCC Chapter 20.36 for the creation of a land use permitting pathway for battery energy storage systems. The proposed text amendments are described in the attached materials, along with a demonstration of compliance with the Countywide Planning Policies and Comprehensive Plan.

We look forward to working with you and the Whatcom County Planning and Development Services on this text amendment request. If you have any initial questions, please do not hesitate to contact me at 503.200.0005 or Paul.Seilo@Jacobs.com.

Sincerely,

Paul Seilo, AICP  
Senior Project Manager

Cc: Chris Powers/NextEra  
Keleigh Wright/NextEra  
Tim McMahan/NextEra  
David Lawlor/NextEra  
Erika Sawyer/Jacobs

**WHATCOM COUNTY**  
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**Mark Personius, AICP**  
Director

**Comprehensive Plan and/or  
Development Regulation  
Amendment Application**

Whatcom County Planning and  
Development Services  
**Received**  
Received  
by: nsmith  
12/29/2020

**REVISED**  
01/26/2021

Date Received: 12/29/2020 File #: PLN2021-00001

Please check one or more of the following amendment types:

- Comprehensive Plan Map
- Comprehensive Plan Text
- Development Regulation Map
- Development Regulation Text

This form should be used for proposed amendments to the following development regulations in the Whatcom County Code:

- Title 16 - Environment,
- Title 20 - Zoning,
- Title 21 - Land Division Regulations, and
- Title 23 - Shoreline Management Program.

Topic of Proposed Amendment:

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**A. General Information – All applicants must complete this section.**

**Applicant Name** \_\_\_\_\_  
Mailing Address: \_\_\_\_\_ City \_\_\_\_\_  
State \_\_\_\_\_ Zip Code \_\_\_\_\_ Phone # (    ) \_\_\_\_\_  
Email \_\_\_\_\_

**Agent/Contact Name:** \_\_\_\_\_  
Mailing Address: \_\_\_\_\_ City \_\_\_\_\_  
State \_\_\_\_\_ Zip Code \_\_\_\_\_ Phone # (    ) \_\_\_\_\_  
Email \_\_\_\_\_

Please complete the questions below. Attach additional pages as needed

**B. For Map Amendments**

**Parcel Information**

Tax Parcel Number(s) (APN) \_\_\_\_\_  
Total Acreage - Gross \_\_\_\_\_ Net: \_\_\_\_\_  
Site Address \_\_\_\_\_  
Township: \_\_\_\_\_ Range: \_\_\_\_\_ Section: \_\_\_\_\_ 1/4 Section: \_\_\_\_\_

**Owner Name** \_\_\_\_\_  
Mailing Address: \_\_\_\_\_ City \_\_\_\_\_  
State \_\_\_\_\_ Zip Code \_\_\_\_\_ Phone # (    ) \_\_\_\_\_  
Email \_\_\_\_\_

1. Existing Comprehensive Plan Designation: \_\_\_\_\_
2. Existing Zoning Designation: \_\_\_\_\_
3. Proposed Comprehensive Plan Designation: \_\_\_\_\_
4. Proposed Zoning Designation: \_\_\_\_\_
5. The Present Use of the Property is:

6. The Intended Future Use of the Property is:

7. Surrounding Land Use:

8. Services:

Please provide the following information regarding the availability of services:

The site is currently served by:  Sewer       Septic

If sewer the purveyor is: \_\_\_\_\_

The site is currently served by:  Public Water System    Well

If public water the purveyor is: \_\_\_\_\_

The site is located on a:  Public Road       Private Road

Name of Road: \_\_\_\_\_

Fire District #: \_\_\_\_\_ Name: \_\_\_\_\_

School District #: \_\_\_\_\_ Name: \_\_\_\_\_

9. Transfer of Development Rights (TDRs):

Are TDRs required under section 20.89.050 of the Whatcom County Code?

Yes       No

If so, please explain how your proposal complies with the TDR requirements and/or how you qualify for modification/exceptions from the TDR requirements



4. How is the proposed amendment consistent with the Whatcom County Comprehensive Plan?

5. If within an Urban Growth Area, how is the proposed amendment consistent with interlocal agreements between the County and the City?

6. What changed conditions or further studies indicate a need for the amendment?

7. How will the public interest be served by the amendment? Please address the factors identified below.

- The anticipated effect upon the rate or distribution of population growth, employment growth, development, and conversion of land as envisioned in the Comprehensive Plan.
- The anticipated effect upon the ability of the County and/or other service providers, such as cities, schools, water and/or sewer purveyors, fire districts, and others as applicable, to provide adequate services and public facilities including transportation facilities.

- Anticipated impact upon designated agricultural, forest and mineral resource lands.

8. Does the amendment include or facilitate illegal spot zoning?  Yes  No  
Please explain.

**E. Supporting Information – Attach the Following:**

- A. A vicinity map showing property lines, roads, existing and proposed Comprehensive Plan and Zoning designations. (This information is required for map amendments only).
- B. Mailing labels with names and mailing addresses of the owners of all property included within the area proposed for re-designation and:
  - For a map amendment within an existing urban growth area, mailing labels with the typed address of each property owner within 300 feet of the external boundaries of the subject property as shown by the records of the county assessor.
  - For a map amendment outside existing urban growth areas, mailing

labels with the typed address of each property owner within 1,000 feet of the external boundaries of the subject property as shown by the records of the county assessor.

- For map amendments that involve rezoning property to an Airport Operations District, mailing labels with the typed address of each property owner within 1,500 feet of the external boundaries of the subject property as shown by the records of the county assessor.
- For map amendments that involve rezoning property to a Mineral Resource Land (MRL) designation, mailing labels with the typed address of each property owner within 2,000 feet of the external boundaries of the subject property as shown by the records of the county assessor.

C. State Environmental Policy Act (SEPA) Checklist

D. For Comprehensive Plan map amendments that propose to re-designate property to a MRL designation, a Comprehensive Plan MRL Application Supplement form is required.

**F. Fees**

Applicants pay a docketing fee when submitting an application and additional amendment application fees if the County Council decides to docket the application. The Whatcom County Code 22.10.020(3)(b) states that, when docketing an application, the county council may waive the application fees if it finds the proposed amendment would clearly benefit the community as a whole.

A. Are you requesting that the County Council waive the application fees?  
 Yes       No

If so, please describe how the proposed amendment clearly benefits the community as a whole.



## Attachment 1. Whatcom County Development Regulation Amendment Application Battery Energy Storage System

Parts A, E, F and G of the application are included on the preceding Whatcom County Development Regulation Amendment Application form. Part B does not apply as it is only applicable when a Map Amendment is proposed. This document includes information for Parts C and D of the application.

### Part C. For Text Amendments:

Identify the sections of the Comprehensive Plan and/or development regulation that you are proposing to change and provide the proposed wording.

The proposal seeks to amend the Whatcom County Code (WCC) Definitions Chapter 20.97 by adding a definition for Battery Energy Storage System (BESS) and modifying the existing definition of a Public Utility; to amend the Rural (R) District zoning district (WCC Chapter 20.36) to add BESS as a conditional use and to increase the lot coverage allowance in the R district for BESS; and to add BESS as a conditional use in WCC Chapter 20.82 Public Utilities.

The underlined statements below indicate a proposed amendment to the WCC section to include this verbiage.

### Chapter 20.97 Definitions

#### 20.97.025 Battery Energy Storage System (BESS)

“Battery energy storage system” (BESS) means an energy storage system that can store and deploy generated energy, typically a group of batteries that charge (i.e., collect energy) and store electrical energy from the grid or energy generation facility and then discharge that energy at a later time to provide electricity or other grid services when needed. BESS generally consist of batteries, battery storage containers, on-site switchyard, inverters, associated interconnection transmission line, and supervisory control and data acquisition system.

#### 20.97.329.1 Public utility.

“Public utility” means a use owned or operated by a public or publicly licensed or franchised agency including energy uses proposed by an independent energy facility developer which provides vital public services such as telephone exchanges, electric generation and storage,

**energy** substations, radio and television stations, wireless communications services, gas and water regulation stations and other facilities of this nature. (Ord. 2004-014 § 2, 2004; Ord. 2000-006 § 2, 2000).

## **Chapter 20.36 Rural (R) District**

### **20.36.150 Conditional uses.**

#### **.166 Battery energy storage systems.**

##### **20.36.450 Lot coverage (Adopted by reference in WCCP Chapter 2.)**

Except as follows, no structure or combination of structures shall occupy or cover more than 5,000 square feet or 20 percent, whichever is greater, of the total lot area, not to exceed 25,000 square feet. Public community facilities that serve a predominantly rural area shall occupy or cover no more than 35 percent of a lot, with no limitation on structure (or combination of structures) size. **Battery energy storage system shall occupy or cover no more than 40 percent of a lot, with no limitation on structure (or combination of structures) size.** Buildings used for livestock or agricultural products shall be exempt from this lot coverage requirement. (Ord. 2019-033 Exh. A, 2019; Ord. 2013-057 § 1 (Exh. A), 2013; Ord. 2012-032 § 2 Exh. B, 2012; Ord. 88-29, 1988).

## **Chapter 20.82 Public Utilities**

### **20.82.030 Conditional uses.**

#### **(11) Battery energy storage systems operating at voltages greater than 55 kV (55,000 volts).**

## Part D. For All Amendments

### 1. Why is the amendment needed and being proposed?

Response: The text amendments are proposed to:

- (1) To promote the siting of battery energy storage systems (BESS) in a manner that is compatible with existing zoning districts, land uses, character of the surrounding area, and where BESS can be located adjacent to existing energy and utility infrastructure;
- (2) To increase the resiliency of the energy grid in the nearby communities of Bellingham, Ferndale, and the greater Whatcom County area; and
- (3) To provide alternatives to store and deploy energy in an efficient manner.

### **A Promising Future For Battery Energy Storage Systems**

***Technology offers flexibility and value in today's energy market.*** Meeting today's energy challenges is complicated. Energy infrastructure must be able to balance supply and demand instantaneously while taking into account the impacts of intermittent renewable energy. Consumers are also looking for energy services and products that provide flexibility and value in the areas of renewable energy, grid reliability and peaking power. Battery energy storage system technology is providing a promising way to store electrical energy so it can be available to meet demand whenever needed.

***Energy storage delivers advantages to the power grid.*** What makes energy storage attractive is that it allows energy to be delivered instantly, in the required amount. By doing this, energy storage provides many advantages, such as improving the operation of the electrical grid, integrating renewable resources and helping investment decisions.

- Grid enhancement. Energy storage can balance load on the power system grid by moving energy when demands are low to times when demands are high. The technology also allows for a seamless switch between power sources and protects equipment by controlling voltage and frequency.
- Renewable resources. Energy storage fills in the gaps resulting from intermittent resources like wind and solar generation. That means operators can more easily bring on and off renewable energy, reducing the need for load balancing services and rapid generation ramping.

- Electrical system investments. By reducing the load on congested transmission and distribution systems, energy storage may defer expensive upgrades. In some cases, storage may also reduce new investment in conventional resources, such as adding generating plants to meet systemwide peak load.

**Projects require little land, provide many benefits.** Energy storage projects do not require a large area for development, are scalable in size and can be located in many places. The optimum BESS siting is as close as possible to existing electrical transmission or distribution infrastructure and often, close to an existing renewable project. Other benefits of energy storage include no greenhouse gases or other air pollutants, no use of water to generate electricity, and a renewable supply of energy.

**Interest in energy storage is growing.** The growing interest in energy storage is being driven by a number of factors, including:

- Reductions in technology costs.
- The rapid development of intermittent renewable energy resources.
- The evaluation of new policy initiatives by states.
- Regulatory changes.

For example, the Federal Energy Regulatory Commission has mandated policy changes in the frequency regulation market that have helped spur the use of energy storage for this purpose. Certain markets are now encouraging utilities to use energy storage to manage the intermittent energy that flows into the grid and to supply the grid with energy during times of peak use.

**Costs are expected to decline.** While emerging technology costs tend to be higher and therefore less competitive during the early evolution phase, technological efficiencies, improved manufacturing productivity and economies of scale help lower cost over time. As batteries gain wider industry adoption, prices are expected to decrease further.

Energy storage is safe, reliable. Overall, energy storage has been a part of the U.S. electric system since the 1930s. Today, it makes up approximately 2% of the nation's generation capacity, according to the Energy Storage Association. The safety record of the industry is similar to or better than other forms of power generation or distribution.

## 2. How does the proposed amendment conform to the requirements of the Growth Management Act?

The proposed text amendments will help Whatcom County comply with Goal 12 of the Growth Management Act which is as follows under Revised Code of Washington (RCW) 36.70A.020:

*(12) Public facilities and services. Ensure that those public facilities and services necessary to support development shall be adequate to serve the development at the time the development is available for occupancy and use without decreasing current service levels below locally established minimum standards.*

Response: Battery energy storage systems allow energy to be delivered instantly to the grid, in the required amount. By doing this, energy storage provides many advantages, such as improving the operation of the electrical grid, so it remains adequate to support development. Battery energy storage systems balance load on the power system grid by storing energy when demands are low and then moving it to the grid when demands are high. Battery storage also reduces the load on congested transmission and distribution systems, and energy storage may defer expensive upgrades.

## 3. How is the proposed amendment consistent with the County-Wide Planning Policies for Whatcom County?

Response: The proposed text amendments to provide a land use permitting pathway for battery energy storage systems are consistent with the following Whatcom County Countywide Planning Policies (Whatcom County, 2016):

### **B. Urban Versus Rural Distinctions**

*3. Whatcom County shall promote appropriate land uses and allow for infill within rural settlements characterized by existing commercial, industrial and intensive residential development greater than a rural development density. These areas should be clearly delineated, and not expanded beyond logical outer boundaries in accordance with RCW 36.70.070(5). Impacts on rural character, critical areas and other economic considerations as well as the availability of capital facilities and rural levels of service must be considered before allowing infill in these areas.*

Response: The proposed text amendments are consistent with the Countywide Planning Policy B.3 for Urban Versus Rural Distinctions as infill battery energy storage systems in the rural zoning district may allow for the clustering of public utilities in manner that enhances energy efficiency and electrical grid stability, while still maintaining a rural character in surrounding areas.

### **I. Economic Development and Employment**

*8. Economic development should be encouraged that:*

*a. Does not adversely impact the environment;*

*b. Is consistent with community values stated in local comprehensive plans;*

- c. Encourages development that provides jobs to county residents;*
- d. Addresses unemployment problems in the county and seeks innovative techniques to attract different industries for a more diversified economic base;*
- e. Promotes reinvestment in the local economy;*
- f. Supports retention and expansion of existing businesses.***

Response: The proposed text amendments are consistent with several of these economic development-related policies [8(a)(b) and (f)]. Battery energy storage systems provide energy efficiency and electrical grid stability on a relatively small footprint. Furthermore, battery energy storage systems do not generate greenhouse gases or other air pollutants, nor use water to generate electricity. The proposed amendments are consistent with the community values, to support electric energy supply for future economic growth within the County that is resilient to the impacts of climate change. Battery energy storage systems are a new technology for the County to store energy in a safe and reliable method that increases the resiliency of the energy grid. The emergence of battery energy storage systems supports the County's efforts to increase its energy options which supports current businesses and could be considered important for locational decisions by industries seeking to relocate or expand in the County.

*11. Whatcom County encourages siting of industrial uses in proximity to and to further utilization of our access to deep water and port facilities for shipping, rail, airports, roadways, utility corridors and the international border.*

Response: The text amendments allow for siting battery energy storage systems near existing energy generation facilities, electrical substations, and transmission line corridors. The clustering of energy generation facilities creates an orderly use of the land, establishes the infrastructure needed to support similar uses, and minimizes the potential for development in greenfield or environmentally sensitive areas that may be suitable for the preservation of land or other uses.

## **K. Siting of Public Facilities**

*1. As part of the comprehensive planning process, the county and the cities shall identify appropriate land for public facilities which meets the needs of the community, such as schools, recreation, transportation and utility corridors, human service facilities, and airport and other port facilities. In order to reduce land use conflicts, policies related to a design component shall be incorporated in the comprehensive plans.*

Response: The Comprehensive Plan supports the identification of suitable lands within zoning designations that may support public facilities and utilities. The text amendments will allow for siting battery energy storage systems near existing energy generation facilities, electrical substations, and transmission line corridors. This is an efficient use of land as these clusters may create more orderly development and minimize environmental impacts by not clustering these uses. Energy efficiency and reliability are important considerations for locational decisions by industries seeking to relocate or expand in the County, thus supporting future growth and employment opportunities for the County.

*5. Sharing of corridors for major utilities, trails and other transportation rights-of-way is encouraged when not in conflict with goals to protect wildlife, public health and safety.*

Response: The text amendments allow for siting battery energy storage systems near existing energy generation facilities, electrical substations, and transmission line corridors. The sharing of corridors for public utilities leads to uniform development and decreases the potential for land use conflicts. The text amendments allow for flexibility in siting battery energy storage systems in a manner that avoids and may preserve critical areas and protects wildlife. Battery energy storage systems have minimal conflict with public health as the technology does not release greenhouse gases or other air pollutants, and no water is required.

#### 4. How is the proposed amendment consistent with the Whatcom County Comprehensive Plan?

Response: The proposed text amendments are consistent with the following Whatcom County Comprehensive Plan provisions:

#### **Comprehensive Plan, Chapter Five. Utilities**

**Goal 5B: Support the Development and use of new utility and information technologies.**

Response: Battery energy storage systems are consistent with this policy as the new and evolving technology fills in the energy generation gaps resulting from intermittent resources like wind and solar generation and can balance load on the power system grid by storing energy when demands are low and then moving it to the grid when demands are high.

**Goal 5F: Identify and remove impediments to effective siting of necessary utility facilities.**

Response: The proposed text amendments provide a land use permitting pathway for siting battery energy storage systems. The proposed text amendments provide a definition for this type of use and establish a process under which it can be approved as a conditional use. The proposed text amendments will provide for the orderly, safe and efficient siting of battery energy storage systems in Whatcom County.

#### **Comprehensive Plan, Chapter Seven. Economics**

**Goal 7C: Ensure adequate infrastructure to support existing and future business development and evolving technology.**

Response: Adequate infrastructure is a basic necessity for the reliable operation and expansion of existing and future businesses and the movement of goods and services. The emergence of battery energy storage systems supports the County's efforts to increase its energy options, and the use of battery storage technology will increase the resiliency of the local grid. This enhancement and reliability of the County's infrastructure is considered important for locational decisions by industries seeking to relocate or expand in the County, thereby supporting both existing and future business development.

5. If within an Urban Growth Area, how is the proposed amendment consistent with interlocal agreements between the County and the City?

Response: No specific project location is proposed.

6. What changed conditions or further studies indicate a need for the amendment?

Response: None.

7. How will the public interest be served by the amendment? Please address the factors identified below.

- *The anticipated effect upon the rate or distribution of population growth, employment growth, development, and conversion of land as envisioned in the Comprehensive Plan.*

Response: The proposed text amendments will not have a direct impact on population growth, although battery energy storage systems may indirectly lead to population, employment, and economic growth by enhancing the electrical grid, a basic necessity for the reliable operation and expansion of existing and future businesses. The emergence of battery energy storage systems supports the County's efforts to increase its energy options, and the use of battery storage technology will increase the resiliency of the local grid. The proposed text amendments allow for siting battery energy storage systems near existing energy generation facilities, electrical substations, and transmission line corridors. The sharing of corridors for public utilities leads to uniform development and decreases the potential for land use conflicts. The text amendments allow for flexibility in siting battery energy storage systems in a manner that avoids and may preserve critical areas and protects wildlife.

- *The anticipated effect upon the ability of the County and/or other service providers, such as cities, schools, water and/or sewer purveyors, fire districts, and others as applicable, to provide adequate services and public facilities including transportation facilities.*

Response: The proposed text amendments will not affect the ability of service providers to provide adequate services and public facilities. Battery energy storage systems will actually enhance local energy efficiency and electrical grid. Battery energy storage systems allow energy to be delivered instantly to the grid, in the required amount. By doing this, energy storage provides many advantages, such as improving the operation of the electrical grid, so it remains adequate to support development. Battery energy storage systems balance load on the power system grid by storing energy when demands are low and then moving it to the grid when demands are high. Battery storage also reduces the load on congested transmission and distribution systems, and energy storage may defer expensive upgrades.

- *Anticipated impact upon designated agricultural, forest and mineral resource lands.*

Response: The proposed text amendments will have minimal direct impacts on designated agricultural, forest or mineral resource lands. The text amendments will allow for siting battery

energy storage systems near existing energy generation facilities, electrical substations, and transmission line corridors. This is an efficient use of land as these clusters may create more orderly development and minimize environmental impacts by not clustering these uses.