

This document is written in response to the California Transmission Planning Group's (CTPG) Phase 3 Study Report. Specifically, this document will discuss the opportunities presented by continued developments in renewable energy generation and transmission in Montana that will impact California's ability to meet the Renewable Portfolio Standard (RPS) goal of 33% by 2020. Achieving California's 33% RPS target by 2020 in an economic and environmentally sustainable manner, which is the objective of the CTPG planning effort, surely cannot be accomplished by looking only inside the state.

Section 1.5.2 of the draft CTPG Phase 2 Study document notes that the CTPG will: "Develop a plan to further investigate out-of-state resource scenarios and associated transmission needs." Montana urges the CTPG to seriously consider the high quality wind resource present in Montana as it evaluates out-of-state resources. Montana has an immense wind resource, by all measures among the top 3 in the US and the best in the Western Interconnect. The recently released Wind Costing Model released on July 1, 2010 by Energy and Environmental Economics (E3) prepared for the State of Wyoming indicates that Montana has the best average wind capacity factor in the west at 37.81% (from WGA WREZ phase one report). The E3 model also indicates that Montana generated wind power has the lowest levelized busbar costs in the west at \$76.62 per MWh, compared to California at \$95.89).

The information that follows provides a snapshot of recently completed wind projects in Montana as well as a sample of projects in various stages of production in the state.

The State of Montana is currently monitoring approximately 50 wind projects in various stages of production. All totaled, those projects could provide an additional 5000 MW of wind nameplate capacity if developed. As of August 2010, Montana produces 386 MW of wind energy. This is significant growth given that in January 2005 Montana had just over 1 MW online.

The projects listed below represent mid to late stage development that could total about 2,242 MW over the next few years.

### **Horizon Wind Energy**

Martinsdale Wind Farm LLC, a subsidiary of Horizon Wind Energy, working in cooperation with the Montana Department of Natural Resources and Conservation (DNRC) is developing a wind energy facility of up to 300 megawatts known as the Martinsdale Wind Power Project in central Montana approximately 20 miles west of Harlowton, Montana.

The Project will initially consist of approximately 36 wind turbine generators, possibly expanding to 100 wind turbine generators, an underground and overhead 34.5 kilovolt electrical

collection system, a project step-up and interconnect substation, a SCADA communication system, hub height free-standing meteorological towers, transmission lines, and access roads.

### **Judith Gap Wind Farm**

The Judith Gap wind farm owned by Invenergy is located six miles south of Judith Gap in Wheatland County. On October 7, 2005, the Judith Gap Wind Farm was dedicated. The 135 MW wind farm is equipped with 90 GE turbines rated a 1.5 MW capacity each. Judith Gap has a proposed expansion of 35 turbines for another 52.5 MW. The Judith Gap Wind Farm has proven to be one GE's best performing sites in terms of wind capacity factor.

### **Horseshoe Bend Wind Park**

This wind farm, located near Great Falls, produces an estimated 9 megawatts of electricity from six 1.5 MW turbines. In 2009, the project was purchased by Sansur Renewable Energy who intends to expand the park, adding an additional 140 MW. Sansur also has plans for a new 100MW wind farm in northeast Montana.

### **Coyote Wind**

The Coyote Wind Project proposes a total of 79.2 MW with 36 turbines generating 64.8 MW on private land and 8 wind turbines generating 14.4 MW on state-owned school Trust land. Enerfin Energy Company of Portland holds the majority stake of Coyote Wind and Alternity Wind Power from New Jersey holds a 5% stake.

### **Glacier / Rim Wind Farms**

NaturEner USA began construction in 2008 on 510 MW of wind power generation near Shelby to be built in three phases. Located in the hills between Cut Bank and Shelby, the first phase generates 106.5 MW. Another 103.5 MW went online in 2009. NaturEner is currently in the process of developing an additional 309 MW of generation capacity in phase three at a site known as the Rim Rock Wind Farm which will connect to the Montana Alberta Tie Line (MATL) transmission line, also slated to be constructed in 2010. This \$800 million project will consist of 206 1.5 MW turbines made by Acciona, a Spanish company.

### **Diamond Willow Wind Farm**

Montana Dakota Utility's Diamond Willow wind farm near Baker was completed in 2008 and includes 13 turbines with a total capacity of 19.5 MW. In June 2010, MDU completed construction of an additional 10MW.

## **Beaver Creek Wind Farm**

This proposed wind farm is located north of Reed Point in Stillwater County. Developer Jon Chafin is proposing to construct 100 MW in the first phase of the project consisting of forty 2.5 MW wind turbines. Future phases of the project are designed to develop a total of 300 MW at the site.

## **Madison Valley Renewable Energy**

This project has been given permission from the Madison County Commissioners to erect eight additional test towers on Norris Hill near Ennis. The company has leased enough ground to eventually produce 150 MW.

## **Sagebrush Energy**

This company will build eight wind generators in the Norris Hill area near Ennis. They plan to begin building upon completion of 18 months of wind data.

## **Gaelectric**

This Irish based company has secured land rights for about 10,000 MW of wind energy development across the northern plains of Montana and has opened an office in Great Falls to facilitate early stage developments that currently total about 1000 MW. They plan to invest \$2 billion over the next 6 years to develop their projects. Recently, the company announced that they have paid \$3.5 million to reserve priority position on the Bonneville Power Administration's interstate transmission system.

## **Wind Energy and Transmission**

Transmission is a key component to the continuation and expansion of wind energy development in Montana. Throughout the western United States, major transmission projects are being proposed for this very purpose. In Montana, there are currently six major transmission projects under development. These projects could total up to 12,000 MW of new electricity capacity for planned and future clean energy projects that could provide up to a total of \$27 billion in investments to Montana.

Attached is supplemental information on the development of transmission projects in Montana.