



# COLORADANS FOR RELIABLE ELECTRICITY

## Frequently Asked Questions:

### **What is the grid and why is it important?**

The grid is composed of a complex mix of energy sources, transmission lines, substations, neighborhood distribution lines, power poles, control systems, and other equipment designed to bring electricity reliably and efficiently to your home or business – everywhere you need and want it. Through an intricate process, electrical power is continuously and instantaneously balanced on the grid, across thousands of miles. The grid assures you that power is there whenever you need it.

The modern grid has evolved in Colorado to the point where large portions of the electric energy passing through the grid comes from clean, but intermittent, renewable energy.

The grid utilizes and balances these intermittent sources, while also maintaining other energy sources to ensure that there is never a period when consumers are without power. Because of the grid, power is delivered consistently day and night, whether the wind's blowing or the sun drifts behind clouds.

If you use electric power, you rely on the grid.

### **What about distributed generation sources such as small windmills and rooftop solar... do they use the grid?**

Yes. In fact, these types of generation sources, although helpful to the overall energy production in the state, actually utilize the grid more than the average electricity consumer.

Let's use rooftop solar as an example. Today about 1 % of Coloradans now have rooftop solar that takes care of much of their power needs. However, these consumers are not independent of the grid. They need it more than their neighbors:

- The grid provides the voltage that enables their rooftop solar panel systems to function;
- The grid enables them to import power when the sun isn't shining because of clouds or at night;
- The grid enables them to export power when they are producing more electricity than they need; and
- The grid gives them the burst of power they need to start up air conditioners and other household motors.

### **Who should pay for the grid?**

Everyone who is connected to the grid should pay his or her fair share of the fixed costs to create and maintain it. Whether generating power onto the grid or pulling power from it – we all depend on the grid.

More importantly, the grid provides reliability to everyone to have the electricity we need at the “flip of a switch,” when we need it.

### **Who maintains the grid and why is it's maintenance more important than ever?**

Across Colorado we rely on our local utilities to maintain the grid. In Colorado, a complex partnership between city utilities, investor owned utilities, and local co-ops all come together to properly maintain the grid.

Just like many of our roads and bridges, much of our state's electric grid was built during the post-World War II economic boom. Like the aging highway system, the grid requires continuous maintenance, improvements, and investments to ensure it is efficient and reliable. In addition, updated standards regarding reliability and security of the grid have also created the need for additional attention and resources.

As our homes and businesses have become much more automated, our appliances and equipment more sophisticated, the demands of the grid have increased dramatically. In addition, the development of distributed generating resources, like rooftop solar, has increased the need for a dependable and modern grid.

