

# EXERGY ENERGY

Always Green, Always On, Always Save.

## Reducing Carbon Footprint with Resilient, Green Energy

**EXERGY ENERGY CAN REDUCE YOUR ORGANIZATION'S CARBON FOOTPRINT FROM ELECTRICITY BY 91.5% IMMEDIATELY**, and we have a plan to deliver a 100% reduction in the near term with no investment or changes to equipment. We don't play tricks or use gimmicks, like reselling worthless RECs, as discussed in our article, [Green Fraud and Green Lies](#).

So briefly, how do we do it? How did we calculate the carbon reduction?

**FIRST, WE PUT OURSELVES IN OUR CUSTOMER'S SHOES** and asked "how can we use the best elements of low-cost, renewable energy and reliable backup generators to solve this complex problem?" Here's what we came up with:

- 1) Deliver low-cost, in-front-of-the-meter electricity from utility-scale renewable producers (solar, wind, & hydro) equal to 1.0x times our customer's annual usage, in kWh;
- 2) Match it with behind-the-meter, highly-reliable, prime-power backup natural gas generators from Tier-1 manufacturers equal to 1.0x our customer's max load, in kW; and
- 3) Manage both with propriety software to reduce our customer's demand and energy charges during the year, and to ensure the generator is online and well maintained.

Our customer receives a bill calculated simply on actual usage and a contracted per-kWh rate. The bill is easy to understand, and it is 10% to 15% less than they currently spend.

**NEXT, WE HAVE TO CALCULATE THE REDUCTION IN CARBON OUTPUT.** Before Exergy, our customer sources all its electricity from the Grid. According to the Energy Information Administration, and including a 6% loss factor, the U.S. average carbon emission is 1.053 lbs./kWh. For a 500kW load operating at 70% of capacity, that is 1,615 tons annually. (source: [EIA](#))

Once subscribed with Exergy, carbon is generated only when a demand response ("DR") event occurs. A 500 kW backup generator produces 1.373 lbs./kWh of carbon at full load (source: Generac) for ~28% of customer consumption. While

the amount of DR varies by location, our average customer will generate 589 tons of carbon a year during DR events.

**SINCE 100% OF OUR CUSTOMER'S ANNUAL ENERGY NEEDS** are supplied by renewable energy, we need to adjust for the carbon offset during DR events. During a DR event, the renewable energy is redirected to other power consumers to offset *their* carbon footprint. Using the U.S. average to calculate such offset values, the renewable energy consumed during 2,500 hours of DR events offsets 452 tons of carbon. The

Carbon Emission Reduction		
<b>Before Exergy</b>	1,615	tons
<b>After Exergy</b>		
DR Carbon	589	tons
Renewable Offset Carbon during DR	452	tons
<b>Overall Carbon Effect</b>	<b>137</b>	<b>tons</b>
Percent Reduction	91.5%	
Loss factor	<b>6.0%</b>	
US Average CO2 per kWh	<b>1.053</b>	Lbs
Generac 500 kW CO2 per kWh	<b>1.373</b>	lbs

offset is slightly less than the DR carbon generation because of the percentage of non-carbon generation from hydro and nuclear that is included in the grid average.

Overall, our customer's carbon emissions are reduced 91.5%.

**WE HAVE A PATH TO 100% REDUCTION IN CARBON OUTPUT.** When the natural gas generator is fueled by biogas or renewable natural gas, or if the generator is replaced by a battery, carbon emissions fall to zero. Exergy has a plan for achieving these results in the coming years.

**WHAT EXERGY DISCOVERED AND BUILT** is changing how energy is delivered and accelerating the adoption of renewable energy.

To learn more, watch our webinar series, available for free at: [exergyenergy.com/homepage/exergy-energy-webinar-series/](http://exergyenergy.com/homepage/exergy-energy-webinar-series/)

**COMMENTS?** Email us at [contactus@ExergyEnergy.com](mailto:contactus@ExergyEnergy.com).