Town of Blowing Rock

Request for Council Action

FROM: David Harwood, President Sketchline Architecture, PLLC
SUBJECT: Clean Energy
TO: Mayor and Council
DATE: November 13, 2018
REQUESTED BY: David Harwood

Public Hearing	☐	Yes	☐	No	☐ Not required	☒ NA
Properly Advertised	☐	Yes	☐	No	☐ Not required	☒NA

BACKGROUND:
At the March 13, 2018 Town Council meeting, Dr. Harvard G. Ayers, representing The Advisory Committee for the North Carolina Climate Solutions Coalition, presented a resolution establishing "a transition from a fossil fuel-based economy to a 100% clean renewable energy for all energy sectors-based economy, by January 1, 2050 or sooner to avoid climate catastrophe, to promote job creation and economic growth, and to protect the Earth for current and future generations from climate catastrophe. Achieving this goal would result in the total phase out of fossil fuels by 2050 for energy use." By a vote of 3-2, Town Council adopted the resolution as a goal.

ATTACHMENTS: Letter from David Harwood.

STAFF RECOMMENDATION:

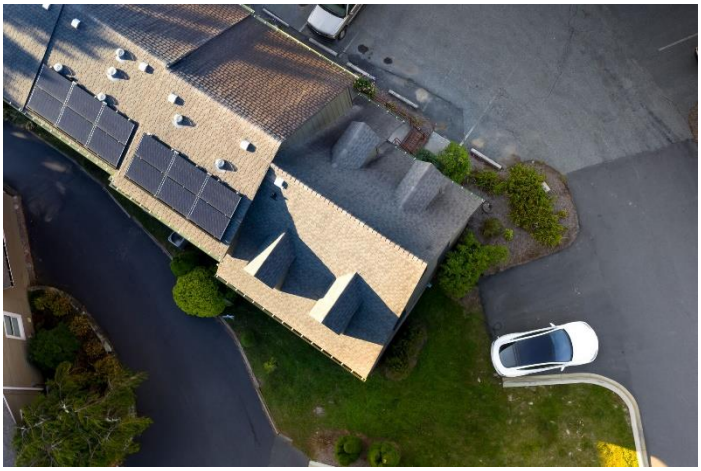
November 1, 2018

Dear Members of the Blowing Rock Town Council and Mayor Sellers,

In March of 2018, two separate events occurred in Blowing Rock that are unwittingly interrelated but went mostly unnoticed by the general public. Both events happened with little to no fanfare but are both very significant for our village. I want to bring these events to your attention not because they are important individually, but because they present an opportunity for Blowing Rock to position itself as a leader in clean energy while being fiscally responsible for our citizens.

At the March 13, 2018 Town Council meeting, Dr. Harvard G. Ayers representing The Advisory Committee for the North Carolina Climate Solutions Coalition presented a resolution establishing "*a transition from a fossil fuel-based economy to a 100% clean renewable energy for all energy sectors-based economy, by January 1, 2050 or sooner to avoid climate catastrophe, to promote job creation and economic growth, and to protect the Earth for current and future generations from climate catastrophe. Achieving this goal would result in the total phase out of fossil fuels by 2050 for energy use.*" By a vote of 3-2, the Town Council adopted this resolution as a goal. Although no action items were prescribed by the Council with this resolution, this event marked another milestone in Blowing Rock's path toward clean energy. It is an admirable goal to pursue 100% renewable energy and more achievable than it has been in the recent past.

The other event that transpired in March was the advent of Blowing Rock's first, commercial power generation installation. 4 Forty Four installed 12 photovoltaic panels on the roof of their Sunset Drive offices. On average, these panels produce 50% of the total power needs of the office. If the panels produce more electricity than is currently needed by the office, the excess is returned to the grid and Blue Ridge Energy credits 4 Forty Four for the power. The construction company also participates in Blue Ridge Energy's Community Solar Program which allows the company to benefit from Blue Ridge Energy's solar farm and provides the company with the other 50% of its energy needs. Through these two sources, the offices of 4 Forty Four are **powered on 100% renewable energy**. An additional 12 panels on 4 Forty Four's roof would have provided all the power the office needs. Unfortunately, Blowing Rock's current land use code limits the amount of roof area available for power generation and curtailed this installation to just 12 panels. In addition to clean energy generation, 4 Forty Four's sustainability initiative includes an electric vehicle which is also powered by energy produced by the same photovoltaic panels. The success of 4 Forty Four's initiative is not only measured in the health of the community or the reduction of carbon emissions. It is also measured financially. The cost of solar installations has dropped significantly. In 2008, the cost of a solar system was approximately $8/watt. Thus, a 5kW system that would provide enough energy for an average home would have cost $40,000. Today, that same system averages nationally for $3.16/watt and would cost $15,800. The return on investment break-even point for 4 Forty Four is under 7 years and the panels are warranted for 20 years. 4 Forty Four is leading the way for Blowing Rock's sustainable future and demonstrates that it is not only achievable, but a financially sound strategy.



It is ironic that both these events happened at the same time and signals an opportunity for Blowing Rock to look at its future and how it can be perceived as a forward thinking, green community. Cities and towns play a key role in reducing carbon emissions. Cities account for approximately 75% of global CO_2 emissions. As renewable energy becomes more

affordable, it is becoming easier for cities to clean their air. Once extremely costly, wind and solar will become the cheapest sources of electricity globally by 2030, according to research firm Bloomberg New Energy Finance. Smaller communities are demonstrating that 100% clean energy can move from a resolution to reality.

In 2008, the small town of Rock Port, MO installed four large wind turbines that provide more power than its 1,300 residents can use.

In 2014, Vermont's largest city of Burlington achieved 100% renewable energy through a combination of wind, solar, landfill methane gas, and hydropower. Once heavily dependent on coal, Burlington now estimates it will save $20 million over the next 20 years.

In 2007, Aspen, CO committed to a 100% energy future and achieved it in 2014 through a combination of hydropower and wind.

Blowing Rock has an opportunity to play a significant role in the clean energy revolution while being fiscally responsible to its citizens. The following are suggestions that will help Blowing Rock achieve a 100% clean energy future as outlined in the resolution presented by Dr. Ayers.

1. **Lead by example with solar panels on public buildings and electric vehicles for town use**. Blowing Rock can save on electricity bills by installing solar projects on public buildings and replace fossil fuel automobiles with electric cars.
2. **Set ambitious goals for clean energy adoption**. Goals provide a shared vision and create a base for planning.
3. **Develop financing options and publicize them.** The Department of Energy's Property Assessed Clean Energy Program (PACE) allows local and state governments to loan money to home and business owners for energy improvements, which they repay over time through property taxes. This can reduce the initial costs for clean energy projects.
4. **Guarantee solar rights.** Solar access ordinances guard homeowners' right to generate electricity from sunlight that shines on their property, regardless of homeowners' association policies. Blowing Rock should also offer clear zoning regulations that allow solar energy installations on residential and commercial rooftops. Consider changing town codes to remove barriers to installing rooftop solar or limiting their quantities.

I appreciate this opportunity to present this information to you and I hope that you find it thought provoking. The more educated I become regarding clean energy, the more I am convinced that we can no longer turn a blind eye to our energy future. Blowing Rock can be an inspiration to other communities, our children and to the thousands of visitors we host each year. I encourage you to consider these issues and how Blowing Rock can embrace a commitment to 100% clean energy.

Best regards,
David Harwood
President
Sketchline Architecture, PLLC