



October 6th, 2020

Planning Board, Board of Supervisors,
Southampton County

To whom it may concern,

The importance of reducing CO2

When considering permitting applications and Special Use Permits for solar farms, many people claim to have the information they need to make decisions. Sadly, there is a lot of misinformation out there and opinion masquerading as fact. Once such opinion is that "solar farms do not contribute to the removal of carbon from the environment".

As a responsible developer, we advocate facts and scientific information, not opinion, and we feel it is important to share this as widely as possible to enable informed decision making.

It is true that solar panels themselves do not directly remove carbon from the environment, just like a coal fired power station does not itself add carbon dioxide to the environment. The question should be whether a kilowatt hour of energy produced by solar produces less carbon dioxide than other sources of electricity. The answer to that is clear; solar produces zero CO2 for each kWh produced.

So as far as the production of electricity is concerned solar farms are preferable over fossil fuel generators in avoiding carbon dioxide emissions.

Does a solar farm stand up to planting trees or growing crops in 'removing carbon dioxide from the atmosphere' though?

"Currently, around 25 per cent of carbon emissions from the use of fossil fuels is being taken up and stored by plants, which is good, as it helps reduce the concentration of greenhouse gases in the atmosphere," ANU researcher Owen Atkin said.

Let us look at some numbers to compare a 40-acre parcel. In practical terms, one 40-acre solar farm will produce 12,500 MWh of energy per year without producing any CO2. Assuming we continue to use the same amount of electricity, this displaces the 1,714.28 tons of CO2 that would have been produced by a traditional fossil fuel plant generating that same amount of electricity.

For comparison, a 40-acre field of corn will absorb 653.17 tons of CO2 per year. Most of that stored CO2 will eventually return to the atmosphere as the corn residue decomposes, and as the corn is used as feed or biofuel.

So, 40 acres of crop temporarily absorbs 653 tons of CO2 from the atmosphere while a 40-acre solar farm avoids 1,714 tons of CO2 emissions. A 40-acre solar farm is 262% more beneficial in terms of net CO2 in the atmosphere.

I have enclosed a summary of various scientific research studies supporting this data and fact.



We continue to strive for a fact-based dialogue with all parties concerned and recognize the need for a diverse local economy where sensible development, nature, and traditional farming co-exist.

Sincerely,

A handwritten signature in black ink that reads "Bill Melanson".

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