



A Leon County Carbon Dioxide Emissions Inventory - A Call to Action!!

In 2017 and 2018 Richard Hopkins, MD, MPH, had a pioneering vision of creating of a single document that puts together all measurable information about the amounts and sources of carbon dioxide (CO₂) emissions from across Leon County. He and other members of Sustainable Tallahassee envisioned this information being used to inform planning for a sustainable energy future in Tallahassee/Leon County. These documents will also inform and enable citizens to monitor progress toward related objectives and goals adopted as part of a community planning process. This document is a 2020 update and expansion of those earlier reports.

On February 20, 2019, the Tallahassee City Commission took the ambitious step of committing to transition Tallahassee city-wide to a 100% clean, renewable energy future by 2050. This document is intended to provide a beginning yardstick against which to measure our City and Countywide progress towards those and other important commitments to our children, grandchildren and the future. We are fortunate to live in a City and County with forward looking City and County Commissions and staff. Their guidance places our community as one of the State leaders in reducing global warming precursors.

Almost a decade ago I was invited to give a presentation to the Sustainable Tallahassee monthly meeting titled "An Environmental Economists Perspective on Global Warming". During that presentation I was asked by an attendee "What could we possibly do to avoid global warming?" My response was "Nothing....we are already deeply experiencing it...but there's a lot we can do *now* and in the future *to help mitigate some of the worse forecasted adverse effects.*" When asked to elaborate on some of those actions I enumerated a number and suggested some were costly and many costless. However, in my view to pursue any of them was to empower ourselves to contribute to solutions and not just twist slowly in the winds with anxious feelings of powerlessness.

Many others had similar ideas and acted on them since then. This study reports on some of those measures in the ensuing decade taken by Leon County local governments, individuals, businesses, churches, schools and other establishments to confront and help resolve these issues locally. There is much yet left to do and yes, you too can contribute to these efforts if you so choose.

Yet the question persists, "What actions can I as an individual take to contribute to the reduction in global warming precursors from our community"? This is an especially timely question given new opportunities and national incentives forthcoming passed by the Congress and signed into law by President Biden in August 2022. Some of the most effective actions taken to date include:

- 1) The very simplest, most cost-effective and free of charge action is to secure a free energy audit (and or other services offered) from the city of Tallahassee or Talquin Electric Cooperative's home Demand Side Management office. Anyone in the County can call their energy provider to get a complete energy audit of their home, business or other establishment. These services provide expert help to develop a plan to reduce consumption of customer energy, money and thereby reduce CO₂ emissions.

- City of Tallahassee Demand Side Management activities alone are estimated to have reduced Leon County CO_2 emissions by 43,963 tons (or 1.5% of total Countywide emissions) for 2020 alone. *That translates to an 800 pounds (or.4 tons) CO_2 annual reduction per City of Tallahassee residential energy customer. That is significant.*
- 2) Support, encourage and demand local and State governments, energy providers, business and individuals to undertake aggressive energy conservation initiatives, alternative energy solutions and programs. As this study demonstrates all these actions big and small can make meaningful contributions to reducing these costly emissions from our local, statewide, national, and international skies.
 - 3) Implement solar and other alternative energy solutions. Join our 700+ and growing number of local residents, businesses and institutions who have installed solar energy, solar hot water generating and other alternative energy generating and saving technologies. As this study amply shows these efforts can significantly reduce local fossil fuel energy generation needs and thereby unneeded CO_2 emissions. In 2021 the average Leon County customer-installed solar energy array was estimated at 10.7 kWac. This average customer system is conservatively estimated to have generate 12,379 kWh in that year and reduce local CO_2 emissions by 5,253 pounds or 2.6 tons annually. This too is significant.
 - 4) Purchase, lease and encourage public ownership and use of electrified (including dual fueled and other alternatively fueled) transportation vehicles. Each of the 993 light duty fully electric private and public vehicles operating across Leon County in 2020 annually removed 5.8 tons of CO_2 from the Leon County atmosphere. Each of COT Starmetro's 19 operating electric busses meanwhile annually removes 115 tons (or 230,000 pounds) of County CO_2 emissions annually. Each makes a meaningful contribution. Yes, this too is significant.

Taken together by 2020 these affirmatively implemented CO_2 removal technologies and actions of have discernably reduced total annual Leon County CO_2 emissions by 3.1%. We can all agree that much additionally need be done by all of us to accomplish the City Commission's lofty goals of city-wide 100% clean, renewable energy by 2050. Yet also, our community should take a moment to reflect and be gratified too that it has made a conscious and significant start. We are on the right path. Let us all move forward together with reenergized determination. There is much left to do.

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