

Councillor Ann Baird's update for Monday March 18th, 2019

CRD Climate Action Inter-Municipal Task Force (CRD CAIMTF) – First meeting on April 3rd, 2019. I have asked for three items to be included on the agenda.

1. To meet more often than twice per year as per the terms of reference. Suggest monthly meetings.
2. To discuss holding multiple "Forum of Councils" this term on various topics related to the Climate Emergency.
3. Discuss a CRD organized "Forum of Community Associations" on the topic of the Climate Emergency to allow for direct and facilitated discussions including elected officials and Community Associations (the community leaders), in an interactive and sharing environment.

On a related topic, after listening to the CRD climate emergency deliberations it was clear to me that there was understandably some confusion as to what was meant by Carbon Neutrality by 2030. I wrote a blog post on this and Lisa Helps liked it and reposted on her blog. Here's the link: <https://lisahelpsvictoria.ca/2019/03/05/what-is-carbon-neutrality-offsets-and-counting-emissions/> I have also shared this with the CRD CAIMTF chair for information for our group.

Here's the text of that post:

Who counts greenhouse gas emissions (GHGs)? What emissions are counted? What are carbon offsets?

On Feb 13th, 2019, the CRD made a Climate Emergency Declaration and has committed to becoming **carbon neutral by 2030**. What does this mean? These are the questions that will be explored in the coming months. It is expected that many local governments will also make Climate Emergency Declarations and commit to carbon neutrality in 11 years.

The question of who counts what Green House Gasses (GHGs) has been one that the District of Highlands has explored in quite a bit of detail. In 2017, the District submitted a resolution to UBCM that was endorsed by BC municipalities. The resolution asked the province of BC to report more comprehensively on municipal community GHGs. Here is a short memo with an update on that process and what we learned.

In summary, our communities only count about half of the GHGs we are responsible for. Obviously, we need to count them all if we hope to achieve carbon neutrality by 2030. Historically, the Province has been inconsistent in counting GHGs from large sources such as aviation, embodied carbon (emissions produced in the production of all of our material goods), food and agriculture, and deforestation in our communities (due to logging, or land clearing for development). Thankfully, some municipalities are beginning to count these with Saanich and Victoria leading the way.

The basic challenge is that we have to be consistent with how we define where our emissions come from and who is ultimately responsible for counting them. Do we count the GHGs emitted in our community or in another community for a product that we consume that was manufactured somewhere else? Cars are a good example. Historically we have only counted the fuel burned that we use and *not* the fuel used to mine the materials and manufacture the car.

We have also completely avoided aviation. Who counts these emissions? The community who manufactures the aircraft, or the community that has the airport, or the person who chooses to fly and the community where they live? As you can see it's complicated, but still far simpler in reality than doing one's income taxes. It's just important to decide up front who counts what and be consistent.

Offsets are an important piece of the whole carbon neutrality conversation. Will we allow carbon offsets to be used to offset items like aviation and if so what kind of offsets will truly achieve the intent of reducing emissions. Protecting an existing forest is said to not be a good offset as the forest already exists. In order for an offset to qualify it must take carbon out of the atmosphere and lock it up (sequester it) in some very long term or even permanent way. A few examples of good offsets could be:

1. Planting a *new* forest could achieve this, but not if it will be logged in 50 years. A food forest would be an excellent way to produce food *and* sequester carbon.

2. Creating wetlands are another excellent carbon offset while potentially also achieving other important benefits like storm water management and water filtration.
3. A third offset is regenerative forms of agriculture. Industrial agriculture based on tilling the soils, use of fertilizers and pesticides, and monocultures are enormous sources of GHGs. But, agriculture can be done very differently to sequester large amounts of organics (carbon) in the soil. Other obvious benefits to regenerative agricultural methods include food crops that are more resilient to extreme weather events, they use less water, prevent soil erosion, produce a higher quality organic food, and support important natural habitat simultaneously to food production. This is a clear example of something called Low Carbon Resilience or LCR for short.
4. A fourth type of offset could be the use building materials that sequester carbon literally in the structures we build. Materials that lock up carbon are wood, cellulose insulation, fungal insulation, hempcrete buildings, types of plasters, straw bales, and even carbon absorbing high tech products. A good book exploring this topic is *The New Carbon Architecture* by Bruce King.
5. A fifth type of offset is something that can be scaled up everywhere from backyard gardens, to community parks, and to forest ecosystems. It's called biochar. The creation of high quality charcoal produced in a very particular way can be added to the soil where it essentially locks of the carbon for a very long time. Other benefits include a much higher level of soil health, plant health, and water retention all of which are again an example of LCR where local resilience is increased as a byproduct of sequestering carbon.

With any offsets program we need to consider, decide upon, and implement three major items:

1. A method to allocate amount of carbon emitted with activities. There should be an offset required for all of the carbon intensive activities.
2. An offset price per tonne. Note that this is a very different tool/price than a carbon fee or tax. Also, unlike carbon taxes or fees, I'm pretty sure that this offset is in the jurisdiction of local governments, whereas carbon taxes are provincial/federal.
3. A way of vetting the quality of offsets to meet our requirements.

Obviously, if we keep burning fossil fuels at the same rate and then rely on offsets, we will make no progress. The science is extremely clear in that we need to reduce total carbon emissions by 45% by 2030 and create a fully zero-carbon civilization by 2050. The science goes on to say that in addition to this we must also sequester enormous amount of carbon.

My understanding is that **carbon neutral** means total carbon emissions less carbon offsets, balances out to zero. **Zero carbon** means near zero carbon emissions without relying on offsets.

In summary we must count all of our emissions and reduce them all to zero in a very short period of time with extremely limited reliance on offsets. High quality offsets can only be relied on for a very short period of time as we transition rapidly to carbon neutrality by 2030 and ZERO carbon by 2050. We are going to have to change everything including: energy sources and how much we use, agriculture and what we eat, transportation including aviation, consumption of material goods, and how we work and play. Even more importantly, we will simply not be able to do some things. We have entered a time of rapid and exciting change with incredible opportunity to build a better world.

Some useful links:

- Report from SFU ACT on [Low Carbon Resilience](#)
- [IPCC Summary for Urban Policy Makers](#)
- [Climate Change Mitigation Strategies for the BC Forest Sector](#)
- [Basics behind soil carbon storage](#)
- [Article on carbon offsets](#)