

MARIN CONSERVATION LEAGUE

Climate Action Working Group: April 29, 2016

Tamalpais Conference Room, 175 N. Redwood Blvd., San Rafael

Present: Pam Reaves, Doug Wilson, Ed Mainland, Tamra Peters, Polina Osipova, Nelson Lomeli, Judy Tecihman, Pat Nelson, Andrea Taylor, Cory Bytof, Rick Fraites, Dana Armanino, Kate Powers, Nona Dennis, Belle Colle, Bob Miller, Tom Flynn, Kiki LaPorta, Chris Calloway. Chris Jones, Ph.D. Guest speaker.

Doug called the meeting to order at 9:05.

Brief Introductions

Adoption of the Agenda: The agenda was adopted. M/S/P. Judy/Bill/P.

Approval of Minutes: Approved. M/S/P. Tamra/Bill/P

Discussion 1: Consumption-based metrics of GHG emissions

Doug introduced our guest speaker Chris Jones, Program Director at CoolClimate Network, a research program of the Renewable and Appropriate Energy Laboratory at the University of California, Berkeley. Chris led the development of the first carbon footprint calculators to account for the greenhouse gas emissions of all goods and services purchased by households and businesses. This consumption-based approach allocates GHG emissions to final demand (the consumer), rather than to the site where production occurs. The consumption-based approach presents both a different vision and a different set of mitigation opportunities. It addresses the impact of lifestyles.

Chris recapped his history, including his PhD received 1 ½ years ago and his Master's degrees in science and in Latin American studies. He has worked on agro forestry projects in the Amazon/Brazil. This experience prompted him to attempt to make Americans aware of their impact on climate change resulting from their lifestyles and to donate money. He helped to create a carbon footprint calculator that measures the impact of high-consumption lifestyles.

Addressing climate change entails more than providing information—understanding our footprint is not enough. We must change our behavior and engage in on-the-ground-up community organizing—for example, the Cool California challenge. We must enable local organizations to engage people. What motivate people? Altruism: People care about helping the community create better places to live.

Comments: Doug mentioned the importance of motivational videos. Tamra noted the parallels to Resilient Neighborhoods.

Chris discussed the Cool City Challenge, which entailed eco teams working block by block. There was a ground-up kickoff meeting in three pilot cities. This led to criticism that the cities selected were not representative. Why focus investment on cities that were already leading the climate effort? This led to the conclusion that the challenge should be open to all cities.

Comments: competition turns off people; online tools are cumbersome. In 20 competitions, organizers learned that the effort should be simple, social and fun. The UCB pilot engaged 20,000. There were 130,000 pledges, and many stories uploaded.

Questions: Pam: How do you get data? Doug: The issue is how to reach people and motivate change, how to make data usable.

Answer: What is required is a bottom-up, eco team approach. There are different spheres of influence, such as policy & engagement. When oriented to policy, look at the big picture first. Develop a comprehensive approach.

Comments: Doug noted the Climate Action Plans of Marin cities. Nona noted the importance of context, connecting with a global footprint network. The problem exists on a global scale and is not limited to carbon only.

Chris replied that he is not a fan of the ecology approach to the climate change footprint because it is often oversimplified and ineffective due to the way it is communicated. It makes climate change seem less bad than it is. We are overshooting by more than is communicated in this approach. What is a sustainable level of emission? At this point, “zero.” We need to think in terms of a more drastic approach. Life cycle/input/output. The sustainability approach takes national data on forests, for example, a metric that does not really capture the problem. The problem is more complex.

Chris showed us slides from his Masters project. This project addressed emissions allocated to consumers, including indirect emissions that happen elsewhere. The U.S. uses 5 times more than globally. Consumption of transportation, housing, food, goods, services all varies by locale, as does the applicable solution. In transportation, for example, electrification of the transportation industry is a huge part of the solution. They looked at every zip code in the U.S.

Questions/comments. Kiki: How do the numbers address waste? Tamra, “carbon neutral” is a long-term perspective. The next step from the individual footprint is the community footprint.

Answer: On a zip code scale, there is a clear pattern of a low carbon footprint in urban areas, and a high footprint in the suburbs. There are national household surveys, showing that the amount of consumption varies a lot based on vehicle ownership, household size, income, available public transit, commute times, population density and energy prices. See <http://coolclimate.berkeley.edu/maps> for interactive maps. Create inventories for all cities in the Bay Area, cities, counties, neighborhoods. A production-based inventory does not tell the whole

story. Results for the Bay Area show 50 tons of CO₂. A new bar is added for recycling/compost. Most emissions are upstream, accounted for in manufacturing. Use a life cycle model.

What we want is a low carbon footprint with high population. The highest footprints occur in areas of low population. Metro areas are virtually the same. We want to confine areas of growth, for example in East Portland. California is trying to address this issue with AB 32 and priority development areas. The San Joaquin Valley is challenging. Mostly there is a lack of policy.

The color-coded CoolClimate maps are based on modeling by cities. Look at electricity at the zip code level, then estimate at the neighborhood level. Lower-income areas with smaller homes have a lower footprint. Big red areas may have fewer people. The size of the area is based on population. Transportation is a big factor. Hercules is the site of the first platinum LEED community. New urbanism, high density, walkable, with 1500 people, but it is poorly sited.

Question: How do you run the figures later to track change? Answer: We can run them every year. Data come from the Census, American Factfinder. Data on electrifying the vehicle fleet is not captured because DMV is reluctant to supply data. The Air Resources Board has County-level data. Traffic equates with lower fuel efficiency. Use vehicle miles traveled plus assumptions. Commute times increase with population density. A big factor is vehicle ownership. Transit use is included on a household basis, by county. The carbon footprint of public transit is low. Q. Bill: people in sustainably built communities might drive their cars anyway. Answer. There is citywide data on transit systems.

There is a misapplication of high density where it doesn't belong. This is not productive. The next planned LEED platinum community is in Tracy. These should not be built in suburbs. In the suburbs, there is no correlation between density and footprint. In the maps, see the pockets of green. We want more housing in pockets of a green low footprint. Q. Judy: Is there a correlation w BART routes? A. Yes, but no statistics.

Emissions are 35% higher when a consumption-based inventory is applied. Food is a big part of the picture. There are 31 variables; 6 provide the most information: vehicle ownership, household income, household size, home size, carbon intensity of electricity, population density of the neighborhood. We can control where we put homes and the size of homes.

We now have a community wide protocol, in which people are asked to tell a consumption story. Alameda and Sonoma have templates for climate action plans, data plus recommended policies. The objective is to shift consumption away from goods to local services. Comment, Kiki: Marin has many commuters for the service sector.

The consumption-based inventory is a recommended complement to the production-based inventory. It requires people to take more responsibility. It informs planning by looking at variations within the community. Out to 2050, food will be the number one contributor to emissions, based on a life cycle approach considering inputs to production like fertilizer,

petroleum, methane from cows, more potent than CO₂. Q. Can we capture waste with methane digesters? A. This can be reduced, but not on the same scale as vehicles.

Comment, Judy: Two percent of food production impacts are attributable to agriculture. Consumption is 20% including all supply chains. Transportation is 5% of food. Answer. Farmers markets don't reduce transportation. Focus on individual change; be vegan and grow your own food. Reduce waste. We eat too much. Then consider organic v. conventional.

Question, Kiki: Shouldn't we consider water, and electric transportation of water? Answer. We have a 10-region model. Embedded energy entails complicated data.

Question, Andrea: Can we get to negative emissions? Answer. We can invest in carbon offsets and carbon sequestration technology.

Comment, Doug: Anecdotally, imported food is a large factor in globalization. Can we track this? Answer. No, organic food could be from anywhere in the world. We can track school programs. We can't do so easily by looking at individuals' diets in the county.

Policy: there is a new model out to 2015. Result of Bay Area and equally detailed study of all California. There are policy implications of incorporating consumption based information into decision making. We should get rid of natural gas and use behavior-based programs.

There is a shift in thinking re the future. There are three ways to reduce population consumption and emissions per unit consumed: 1) urban infill, put people where they have the least impact, the urban core; shift home size; 2) technology: electric vehicles, renewable energy, energy-efficient heating; 3) reduce consumption—for example, use public transportation, conservation (less-service diets). There are diff results when you look at implementing policies at different locations. Cities should set own emissions target, per capita, plus by area.

There will be an online tool for economic analysis. This will show how much we should invest in energy efficient buildings before shifting to renewable energy. It is more cost effective to get maximum use of renewable energy. The maximum potential of energy efficient buildings is 40%. Schools 15 % reduction, high tech 60%. Once we have a clean energy economy in 2050, conservation and urban infill doesn't do as much. When we have 80% decarbonization, then planning has less influence. Scale of target affects ranges of mitigation opportunities. We should put most effort into renewables. Should we focus on total emissions or chance of meeting target? The target matters most, an 80% reduction target. This is very difficult and we need to think long-term. Decarbonize the economy and think about food.

Doug: What about carbon sequestration? Answer. Yes, this is important. Soil, mechanical trees, etc. are an important part of the solution.

Question: Can we reduce the cost of transit if it is more efficient? Answer. Yes and no. Consider the marginal cost of abatement curve. There is a portfolio of technology; some might be good,

some not. Reducing first 20% is easier than the last 20%. Look at low-cost efficiency measures first.

Comments: Ed: There is high waste in the current economy. We have a long way to go before it doesn't become efficient to reduce waste. Chris: do what is cost effective; think about upgrading later. Get renewable first. Nelson: Drive electric. Many players are already there.

Bill: We need to get rid of building natural gas facilities. Can we get there with a building code change? State action? It is more challenging if you can't buy gasoline for your car anymore. How do we get there? Chris: AB 32, not a single policy. Feebate? Revenue neutral. Or a carbon tax?

Nona: What about carbon sequestration, putting carbon in the ground? Answer. This will have to be done, particularly in coal consuming states. But this uses more energy. Shifting to renewables is a better strategy.

Comment, Belle: Electric stoves are not that good. Answer. Possibly biofuels in the natural gas system?

Comment/Question, Kiki: We should look at energy efficiency first and electrify our lifestyle. Is there a cost of creating renewables? An extraction cost? Answer. There is not a study yet. Break the issue into component parts.

Question: How do we use consumption-based data before there are studies? How are they put in the maps? Answer. There are different priorities and different strategies for inclusion. Question: Some priorities are in conflict. How accurate is this? Are there questions re accuracy of data. Answer. Yes, that is something to think about. They are peer reviewed, but that is low bar.

Comment: Get trend data from Safeway. Answer. We can track carbon and offset.

Question, Doug: Re relative efficiency, dollar for dollar, where do we get the most bang for the buck? Answer. Look at carbon intensity and substitutes in the data.

Comment, Ed: CCAs don't need to do efficiency because utilities do it.

Discussion 2: Formulating climate questions for Supervisorial candidates

Doug asked us to help formulate questions to ask the candidates. The questions will be funneled into the "Sustainability" category.

Nona: Everyone will say yes, they believe in reducing our carbon footprint. We need to ask: What do you mean by "carbon footprint," and how would you reduce it.

Judy: The Leadership Council of Point Reyes is having a candidate forum next week. People are invited to submit questions. Ask about carbon farming, what is known and within the Ranch Management Plan.

Kiki: We should ask about their views on high-density housing near transit centers.

Ask them to list 3-4 of their ideas.

Confront them with Chris Jones's list. Ask them what they support.

Belle: Ask them about footprints, climate action plans and renewables. There is a list of legislation (Bill).

Bill: The "Sustainable" organizations are having a forum on 5/12. They will take audience questions for ~ one hour.

Andrea: Ask about divestment.

Reports

Lead on Climate: The recent event was a good one, with 250 – 300 people attending. There will be another event in the Fall, to coincide with the November election.

Legislative Update

Additions by Ed: There was an article in the Chronicle reporting that Nancy McFadden, top aide to Gov. Brown, is under investigation for owning PG&E stock. Brown is a strong supporter of the PUC.

A month ago, PUC Commissioner Picker referred to CCAs in an interview as "forced collectivization." There is a petition going around objecting to that attitude.

At least 6 meetings on SB 512, the PUC reform bill, will be held in San Francisco. These should be held statewide to that people can show up/express their views.

RE the PCIA exit charge, there is still talk of issuing a PUC report. They are stalling off a working group.

A merger is proposed between CA ISO and Pacific Corp. This is problematic.

Buffet is doubling down on fossil fuels. This could affect CCAs.

Resilient Neighborhoods -- Tamra

There are four new teams: Sausal-eco, the Fairfax Rat Pack (32,000 lbs reduction), the Novato Vivian Court Carbon Crushers, and the Mill Valliant group. Seventeen of 33 households switched to Deep Green.

Re a course advertised in a catalog, six people have already signed up.

Resilient Neighborhoods gave a presentation to the Property Owners Association in Ross, and mentioned Ross's low status in combatting climate change. They were interested in the emergency preparedness link and a meeting is pending. RN will also present to the Town Council.

Community Marin – Rick

Will meet next month.

Marin Housing Collaborative – Kiki

Marin Housing Collaborative has a fact-based infographic addressing environmentally appropriate housing collaboratives and how hard it is to live in Marin. She will forward it to Doug and Pam.

Next Meeting: Where are we headed?

Next meeting is 5/20.

Nona noted the problem of affluence is a global problem. It is an equity issue and is driving differences in adopting climate policy. The higher the education level, the higher the footprint. This is possibly counter-intuitive.

There is an offset local fund. People would be happy to address us. Seemingly negative data motivates people.

Maybe we can do both. Show the negative and move on to a solution.

Tamra noted that building a climate movement is the last step.

Adjourned: 11:10.

Notes: Pat Nelson