Personal Economics in a Time of Climate Change.

by Allen G. Edwards

This is a partially expanded working outline of Allen's new book

Introduction

I realize that you all have, to one degree or another, been following the climate change issue – otherwise you wouldn't be reading this. Still, I want to start by summarizing the latest and best information on climate science just so we're all on the same page. If the world keeps with current trends on climate emissions, we can expect the following by the turn of the century:

- **Average temperatures will rise 5° Celsius (9° F)**. Parts of the globe will become too hot for human habitation; other parts will become either too dry or flooded.
- **Scientists expect routine Mega-droughts** (extreme droughts that last more than 20 years) around the Mediterranean, parts of Africa, South Asia, South and Central America, and across the western US.
- **Around the globe, climate change has already doubled the area wildfires burn**. Studies indicate that for every degree C the temperature increases, wildfire median area burned will increase by 200 to 400%.
- **If we continue current trends, the sea level could rise 5 feet by 2100** and eventually by 30 feet or more. And there's a chance we're committing to melting all the globe's ice, raising sea level by 220 feet. Our coastal cities will flood, along with our great river deltas and any low lying coastal plains and river valleys. **At the same time, the higher temperatures will cause more intense weather, increasing cyclonic storms and inland flooding**.
- **Because of the warming, what were once tropical diseases are spreading northward**, leaving open the possibility that malaria, dengue, yellow fever, hemorrhagic fever, and others will migrate North, and come to us.
- **Refugees**: The world already has 69 million refugees. The drought, flooding, famine, and epidemics we expect will cause tens, if not hundreds of millions more. The Syrian Civil war and the Central American Drought – in part triggered by a climate change – are small case studies of the political disruptions an influx of refugees can cause as they move into Europe, or North America, or South Asia, or elsewhere.
- **And finally there's famine**: each degree Celsius rise in seasonal temperature is expected to reduce global yields of rice, wheat, corn and barley by 2.5 to 16%. Considering all the other warming related impacts, the world could face a loss of half its food production by 2100. At the same time, the United Nations is projecting we'll have 45% more people to feed (over 11 billion). Just stop for a moment and think about how those numbers tragically collide.

How has the world responded to climate change? Scientists have certainly have studied the problem – the points I summarized above are the result of 4 decades of intensive research. And our climatologists and biologists and economists have given us more than enough information to justify radical, even fanatical action. So what, then, has the world done?

Internationally, the United Nations has been investigating climate change for 35 years. Because of their program, we have a good idea of where the world needs to go. Last Fall the United Nations climate program told us that, in order to minimize the warming to some arbitrary definition of 'acceptable', the world needs to cut greenhouse gas emissions in half by 2030, and to zero by 2050. That means cutting our personal emissions to 3 tons CO_2 equivalent per person per year. To achieve this emissions goal, the world's current per-capita CO_2 equivalent average would need to be cut in half and the US average would need to be cut by $1/6^{th}$.

The United Nations has spent over 25 years developing a framework for international action. This has resulted in worthy goals, widespread mutual promises... but no enforceable commitments.

Nationally we have a different picture. The Democrats have offered flashy but inconsequential legislative proposals – the 2009 Senate cap and trade proposal is a good example – then failed to pass most of them. They have enacted some minimal administrative programs, but the Republicans recently dismantled most of those, along with blocking any further action. If you've followed this at all, you know the gory details. Today we have a climate denier president and a Republican party dedicated to blocking any climate action. The way we are heading, we will see no meaningful national climate efforts for 2 years, or 4, or 6, or more.

California's government (along with some other state governments) is a brighter spot. The state has a modest cap-and-trade experiment, a program to encourage carbon sequestration, and a scattering of other climate actions. But even here there is a great reluctance to ask citizens to do anything themselves about climate change. And without that, our state will pick the low-hanging fruit, and then what?

What are environmental advocates and policy experts saying we should do? In essence, they ask us to turn to government. Some propose a carbon tax, hoping the magic of consumer market forces will convince us to make responsible purchase decisions in light of climate change. Others propose cap-and-trade programs, hoping that the magic of producer economics will make those decisions for us. And still others (recently including the US Chamber of Commerce) would have the government promote technology development – depending on some technologies that are already commercial, and others that are hoped-for miracles.

These proposed solutions have been around for decades. They all have four basic attributes in common:

- First, they ignore the fact that previous attempts to implement these kinds of policies have failed.
- Second, they seek to arrest the warming without having the courage asking us to change how we live – essentially without really changing anything.
- Third, despite acknowledging the spectacular costs shifting to a fossil free society, the proposals ignore what once was a core principle for renewable technology development -- the more we shrink our individual energy footprints, the less money is needed for investment in technology change-over. Unfortunately, they make little attempt to significantly reduce the energy (and closely related material) demands of the economy.
- Fourth, they ask us to trust the power of our government's economic policy, and

even more, trust the very economic system that brought us climate change, to save us from climate change. Against all basic reason, we are asked to trust this same system with our lives and the lives of our descendants, along with the life of the planet as we know it.

What have we individuals been doing? Well, we've been trying. When we look at the problem in any depth, we see that it is caused by greenhouse gas emissions, and we know Americans have among the highest emissions in the world. So we realize that we are causing the problem. And when we add that to the impacts we know are coming – the ones I described when I started – we, to one degree or another, feel a moral obligation to do something.

So we've been trying. We've taken to heart the widespread advice that we need to start with small steps, because at least they move us in the right direction. Many of us bought hybrid autos; some us stacked solar panels on our roofs; we've offset our air travel and changed our light bulbs, recycle our trash, worked to reduce our consumption of plastic bags.

Has all this solved the problem, or just diminished our guilt? The naked truth is that national and global greenhouse gas emissions continue to grow. That's because neither government policies nor our collective actions have touched the root of the problem. And it's become clear that small steps are no longer sufficient. But what should we do?

We are facing a time unlike the world has ever seen. Anthropogenic climate change shambles along and drags us toward a ruin that may ultimately threaten our existence as a species. We know our collective culture needs to stop the warming, or it will surely tear itself apart. But how do we bring that about?

I've studied climate change science and climate action for more than three decades. I've examined my own guilt as a person who is a part the problem. And after all that, I've come to the firm conviction that I and most other Americans want to fight climate change, but we simply don't know what to do. We as individuals have been waiting for something monumental on climate change. We have been waiting for an inspiration that will speak to our inner morality, We have been waiting for a coherent course of action that makes a genuine contribution to stopping the warming, no matter how small. And we, as a part of a political body, have been waiting for leadership – not more political rhetoric, but true leadership, proven through example, that will give our communities and politicians the courage to support the values we express.

A few months ago I read June Jordan's “Poem for South African Women”. While it is about racial injustice not climate change, I was struck dumb by the last line, “We are the ones we've been waiting for”.

Applying her concept to this problem, I realized that we can stop waiting.... We have arrived. We have the means – control within our own hands – to make personal economic decisions that will turn us away from climate disaster. And that is my message – how we as individuals can start taking control of climate change. How we can take personal responsibility for the fault we bear. How we can change our lives, not only help arrest the warming, but also make amends for the damage we've caused. And how we can join with others to take the moral high ground on this, the most crucial ethical issue of our time. And from that position, we can serve as role models for our communities. And from there, drive politics in an entirely new direction.

That is what I propose. Not marching for social justice, no matter how justified, – not as a first step, although that will come. Not advocating legislation – not initially – although that is surely needed. Not blaming others, although some certainly do bear blame. And not giving up all hope – no matter how justified that may seem – because we are the hope.

Instead, we need to listen to our inner sense of faith, and ethics, and basic self-worth. We need to carefully examine how we live, and how that affects the world. We need to decide what we want our relationship with the world to be. If we do all that, we will conclude that we need to reset the course of our lives to one that is consistent with saving what we truly value. And not waiting for 2030, or 5 years or next year, but starting now. Once we do that, we can move on to changing the nation and the world.

So how do we start? -- A few principles to guide us

Our lives are largely driven by our personal mindset. If we're in love, we focus on expressing that love. If we desire wealth, we focus on money. If we're devoted to a cause, we're willing to make great sacrifices – sometimes, as during war, to the death. Our ability to drive our lives according to our purpose can be truly amazing.

In today's age, in this country and in most advanced economies, the principal mindset that drives economic behavior is consumption (and acquiring the money to consume). We live in a time where the consumption mindset has drastically inflated the American dream. Our obsession with achieving this now almost unobtainable utopia has sucked us into a consumer economy that is has become the master of us all. And that is driving us to a grand and terrible dystopia.

The greenhouse emissions that are causing climate change come partly from producing the stuff we consume, and partly from our using it. Building the car we buy emits 5 to 35 tons of CO_2 equivalent emissions; driving it emits almost a pound a mile. The new house we buy house emits 50 to 100 tons; living in it -- 15 to 30 tons a year. The average American's diet emits at least 3 tons of emissions per-person year. The other stuff we buy on a regular basis – 3 to 6 tons a year. And on and on. We Americans consume enough to emit an average of 20 tons CO_2 equivalent a year, and the richer we are the more we emit.

It’s convenient to believe that simply shifting to green technologies will arrest climate change – to think that their development will change the course of our economy, and make everything right. And we won't personally need to really change anything – just go with the flow, buy the latest new green thing when it comes to market, and discard our old thing. Just do that and climate change will go away.

The sad truth is that even the magic of solar and wind power aren’t likely to cut current emissions in half, let alone to three tons per person/year. And they certainly can't take us to zero emissions. By themselves, they are not zero emission technologies. And besides, getting to zero is about more than the electricity production. There are huge emissions embedded in the myriad things we buy – in extracting and processing the materials; in manufacturing, shipping, and distribution; in how they are used; and in their disposal. If we keep buying and using all that stuff, we will keep spewing greenhouse gases into the atmosphere.

We need to change that. And to do so, we need to get rid of the consumption mindset and find a new model for how we live. We won't protect ourselves from global warming, heal the world, and find inner peace by a continued focus on consumption. Sadly, the

climate laws that have been and are proposed won't force us out of this mindset – we need to do it ourselves – break away, find a new model -- a new American dream

The new dream needs to focus on understanding and satisfying our needs, not being driven by media marketers to some new height of desires. This dream would have us reach out and build and embrace a supportive caring community; not hide in atomized, media-dominated isolation. And it would have us dedicate ourselves to serving the broader needs of humanity – recognizing the interdependent web of social interaction, not the narrow competition-driven profit motives of the corporate economy. But to come to this new dream, we need a new mindset.

I believe this new mindset is really quite basic in concept – **if climate change is a problem of over-consumption, we need to turn away from that and focuses on the following**:

- First, a quest for net-zero greenhouse gas emissions in keeping with the United Nations goals. We owe it to the world to cut our personal greenhouse emissions to the U.N. goals of three tons a year by 2030 or before, and to a net of zero by 2050.
- Next, we need to kindle a desire to make amends for the damage caused by our past greenhouse gas emissions. To put this into perspective, the average American my age has caused the release of 1,500 tons of greenhouse gases into the atmosphere during his or her lifetime. And most of us here are probably above average. For reference, the average citizen my age from the nation of Chad has released 7 tons. That person and all of his or her brethren in the developing world want a better life. They think they want the life we have. But for the salvation of the our species, we need to demonstrate to them a better life – one that is not world-destroying like our current one – by living it.
- Finally, we need to search for a new purpose and peace in a troubled world – The treadmill we live on in order to practice our consumption lifestyle has not, for most, led to fulfillment, even for those who achieve wealth. And those of us who have stopped to consider the deeper moral consequences of our lifestyle have found the consumption treadmill an empty place. Many of us are searching for some refuge from this physically and emotionally troubled world. We owe it to ourselves to find it. Doing all the above will help.

I am proposing what I like to characterize as “The Grand Adventure” **–** likely the most consequential set of decisions we will make during our lives. Some might call it the grand sacrifice, or the grand regression. But I believe the process, though challenging, will be healing, deeply rewarding, and inspiring to society around us – especially to our descendants. We, for once, will be heroes. And our Grand Adventure will rebuild our lives – physically, ethically, maybe even spiritually.

Heroics aside, there are some additional concepts that will help guide us:

- We can't get to Net Zero alone, and taking this journey with others will enrich the whole process.
- We need to focus on function, particularly over fashion.
- We need to step outside the box, then throw the box in the trash – adapt, then adapt some more, then do it again.
- We need keep experimenting – keep trying things – discarding the failures and

expanding the successes.

- We need to remember sunk costs and sunk emissions – then use what's available to us now before building or buying something new.
- Finally, we need to remember that the most logical and effective steps we can take in personally responding to climate change will save us money.

  Think about it for a second – our greenhouse gas emissions are driven by our consumption. And consumption in this economy, means buying virtually everything and personally producing little. That takes our money. So if we cut our emissions by cutting consumption, we generally spend a lot less money.

What are the specific steps I propose?

Briefly, I want to sketch out the Personal Economics Program I'm proposing:

<u>Step One/Chapter One:</u> Subject our lives to what I call "The Great Edit".

My training in writing (first technical, then fiction writing) repeatedly emphasized the concept of editing – cutting the words down to the minimum needed to communicate. If a word, or sentence, or paragraph, or chapter doesn't work to communicate the message, change it to something that does, or cut it. It's that simple.

In our Grand Adventure, our journey to zero climate emissions, making amends for our past emissions, and finding a life of meaning and peace we can apply a similar concept – we can't forge ahead to a new life if we're dragging all the baggage from the old one. So we need to look at all aspects of our lives and decide which helps us in this Grand adventure, and which hinders us.

We should start by looking at our possessions. Ask the key question as we look at each item: "**Does it help minimize our climate footprint?**" If it does, we keep it. If not we either find someone for whom it might, or we re-purpose, or we recycle.

Then we can move on through activities in our lives: Employment, entertainment, education, social and spiritual connections. Again the key question is, does continuing this activity foster or hinder the our Grand Adventure.

Editing our stuff – our physical baggage – will likely be the easy step. Editing our social connections, and the activities tied to them may be more challenging. And that's where step two becomes crucial.

<u>Step Two/ Chapter Two</u>: **Recognize we can't do it alone – we need to find or build a community.**

I mentioned in the introduction that we can't get to net zero greenhouse emissions alone, nor would most of us want to. We need to be a part of a community that believes in what we're doing, and with which we can cooperate in getting it done. We may already know people who are already building such a community, or will join with great enthusiasm. And there are likely many others who are what I will call "Latent Members" of this kind of community – people who, like us, genuinely want to stop the warming but haven't figured out how. Or people who have some inkling of what to do but haven't mustered the courage to start. Together we, and they, can do both.

Why it is important to go on this adventure with a community:

- building a critical mass of enthusiasm for action (first penguin off the ice),
- having a support group (even the most dedicated need cheerleaders, and we can be that for each other),
- being able to share skills and ideas (focused skills are better than general ignorance, and with discipline the more ideas the better),
- being able to pool finances (money talks, more money talks louder),
- taking advantage of economies of scale (experience the joys of a micro-economy),
- and experience the power of quantity (you can't have a mass demonstration without mass)

How to build a community:

- The key attributes of such a community are: like values, like commitment, a contribution of abilities (and finances?)
- Visit communities that are doing something similar – intentional communities, co-housing projects, co-living projects, and communities committed to hands-on service.
- Learn about and visit (if possible) Amish, Mennonites, etc., and learn how their communities operate.
- Visit any community that may hold similar values – particularly in regard to climate change and resource over-shoot.
- Engage in lots of conversations to find folks with like minds,
- Eventually take the conversations deep enough to make sure of commitment,
- Allow the image/model of the target community to evolve to a point where there is true consensus.

<u>Step Three/Chapter Three:</u> Develop a concept of the personal economics of place.

Our place – where we live, work, socialize, acquire the goods and services we need to live – all of this has more influence on our climate footprint that any other factor. If we need to commute great distances to work, shop, and socialize, we are committed to a large transportation footprint. Conversely, if we can restructure our lives and rearrange the geography of these lifestyle components, we can substantially shrink that footprint. In addition, place influences how adaptable we can be with our food footprint (growing it ourselves or getting it from a close community), our home energy footprint, entertainment footprint, health footprint, and so forth.

→ The bottom line is that we must determine the best place for us, or at a minimum, how to best adapt to the place where we are.

Note to early readers of this outline. This is a work in progress. The first three chapters above are only partially developed, and there are 17 more chapters planned, along with several appendixes. It there is interest, I'll make them available as I flesh them out.

Thank you for your attention, Allen Edwards