As climate chaos intensifies, some environmentalists are focused on direct action protests to stop fracking, shut off tar sands pipelines and leave fossil fuels in the ground. These are worthy goals, but they come with an inconvenient price: fracking and tar sands delayed the arrival of energy rationing, which is likely to be an intensely unpopular permanent economic shock.

Conventional oil extraction in the US peaked in 1970. Fracking gave a second, short term oil peak that is ebbing now due to debt and depletion. The global peak of conventional oil was a decade ago.

Conventional natural gas in the US peaked in 1973. Now it is half of that flow — most of that decline happened since 2000. Fracked gas is now half of the “natural” gas in the US. Fracked gas may have peaked. Fracking is scraping the bottom of the barrel.

Using solar energy since 1990 (and wind power since 2000) taught me that renewable energy could only run a smaller, steady state economy. Our exponential growth economy requires ever increasing consumption of concentrated resources (fossil fuels are more energy dense than sunlight). A solar powered society would require moving beyond growth-and-debt based money.

After fossil fuel is gone we will only have solar power, but that won't replace our current use. We need to abandon the myth of endless growth on a round, and therefore, finite planet to have a planet on which to live. How will we use the remaining fossil fuels: to make solar panels and relocate food production or to wage Peak Oil Wars? Living on our solar budget will not substitute for digging up a hundred million years of sunlight.

Trump is an enormous threat, but fascism is not a new problem. The United States had a military coup d’etat on November 22, 1963, which led to the war on Vietnam, coups in Brazil, Chile, Indonesia; the Iran-Contra scandal, allowing 9/11 to happen, the invasions of Afghanistan and Iraq. These and other atrocities suggest that Trump is a logical consequence, not an aberration. Obama and Biden expanded the surveillance state, now bequeathed to Trump’s cabinet. And nuclear missiles remain on alert, waiting for the command to commit omnicide. (Obama brought nuclear attack codes to the Nobel Peace Prize ceremony, even Kissinger did not do that.)

We probably passed the ecological tipping point when we collectively ignored Jimmy Carter's call to make the energy crisis the moral equivalent of war, or perhaps when the military and intelligence agencies removed President Kennedy from office without significant objections. What would the world be today if the Cold War and nuclear arms race had ended in JFK’s second term (as was planned) and the resources for endless war had been redirected to peaceful purposes?

Environmental groups unwittingly helped Trump with their silence about coal depletion. He claimed we have a thousand years of coal supplies and it was the Democrats who supposedly stopped coal jobs. That lie helped him win coal mining states (along with rigged voting machines).

Coal extraction peaked in the US in 1999, before the shale gas fracking boom. Coal peaked in Pennsylvania in 1920. We might have decades of coal left, not centuries. Climatology is a science. Geology is also a science.

When energy rationing finally starts, “stop drilling” groups may be popular scapegoats. Most people do not understand physical limits and may believe efforts to blame shortages on environmentalism. Protests do not substitute for the logistics of food distribution.

Corporate and governmental climate denial is not rooted in failure to understand science, but recognition that our endless growth economy requires endless increase of resource use. As fossil fuels deplete, solar panels might keep society together but at a much lower consumption level. Solar panels and wind farms don’t power airplanes and long distance trucking networks. Relocalizing food production is more important than hoping for a techno-fix.

In the 1990s, Trump’s advisor Steve Bannon was director of the Biosphere 2 project, an oil money funded effort to see if domed cities could shelter the super-rich while the rest of us succumb to eco-collapse. This is like the Titanic’s first class passengers getting in the lifeboats first, except we are all in the same boat of “Spaceship Earth” and there’s no escape for anyone.

Instead of gimmicks for billionaires or wars to grab remaining resources, we could implement large scale permaculture projects to create as many “lifeboats” as possible with the goal of rescuing everyone. Protesting systems that keep us fed and warm without practical efforts to create sufficient substitutes is counter-productive. Relocalizing through local and global cooperation might work better than protesting the navigators of our sinking ship of state.