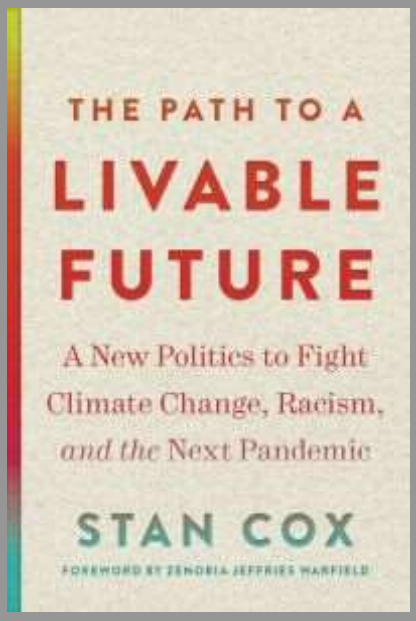
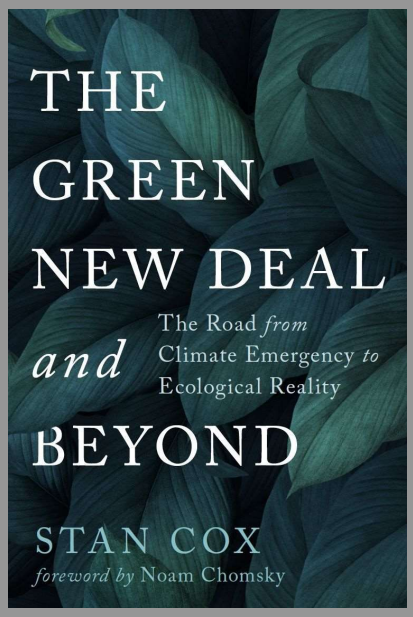
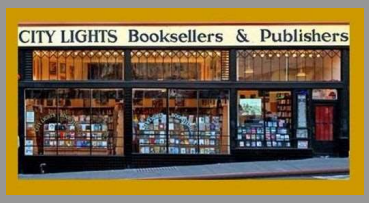
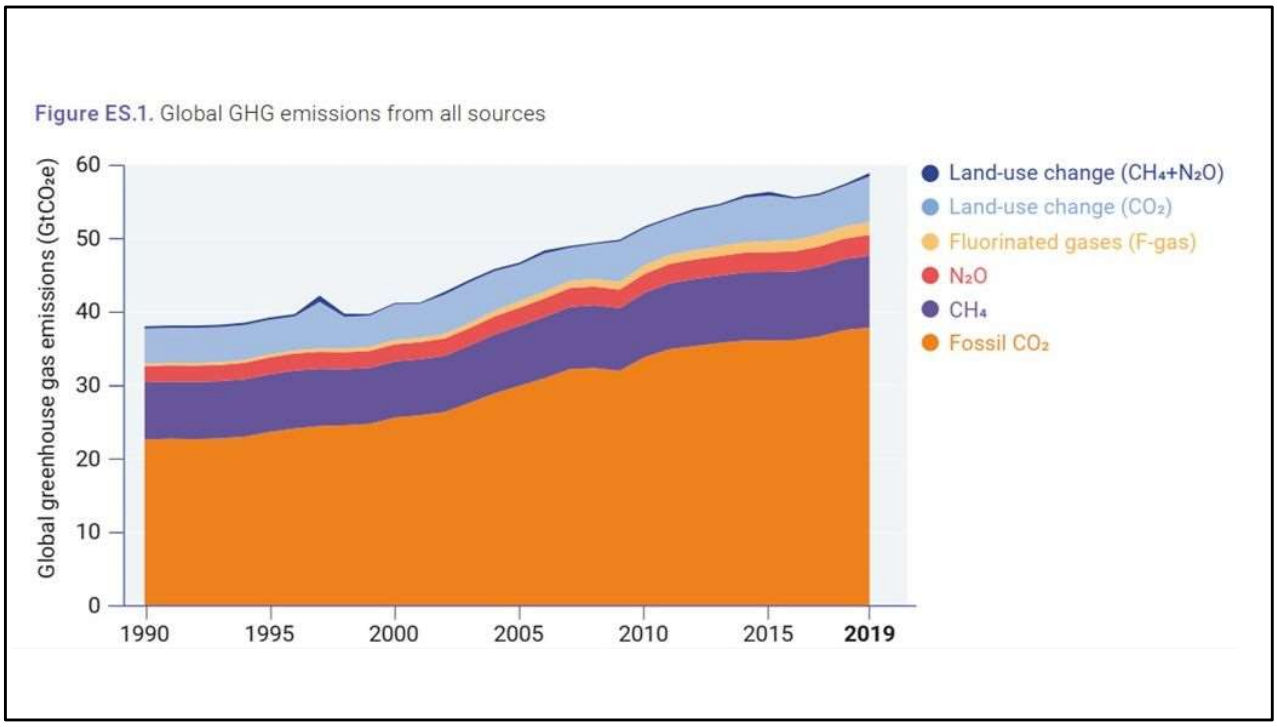


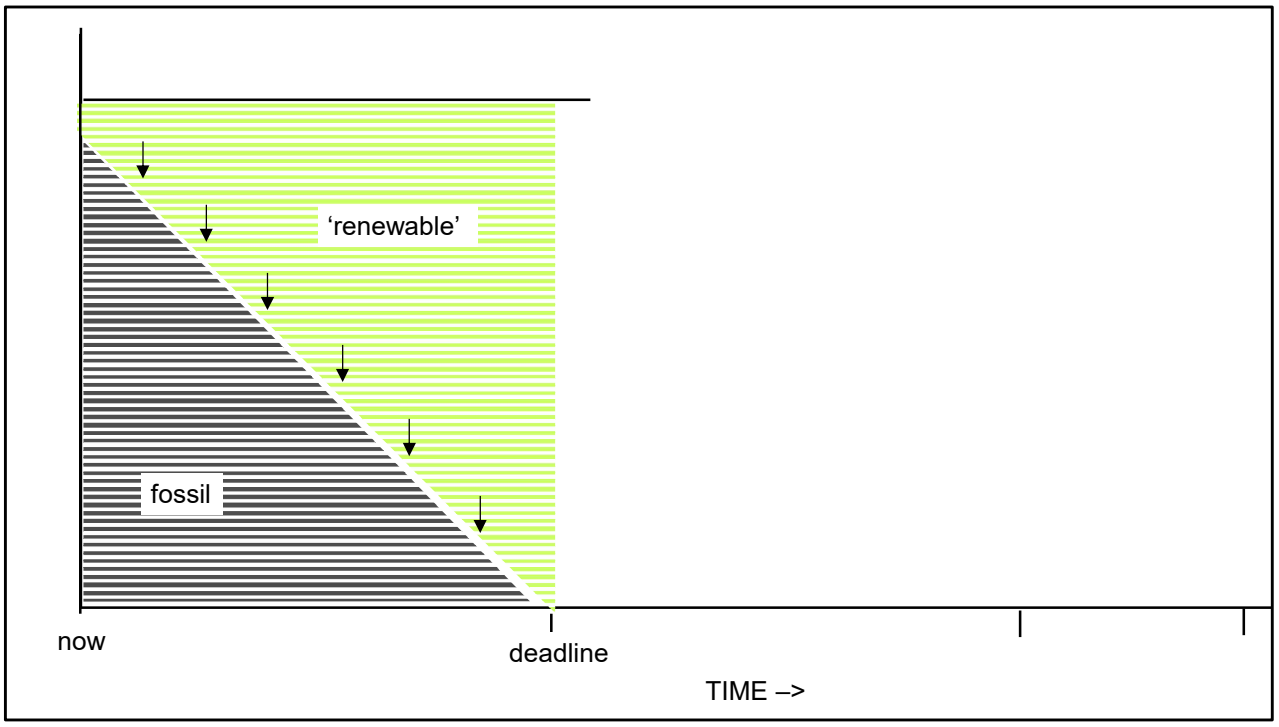




published by
City Lights Books

*CityLights.com*




Together, carbon emissions from fossil fuels (orange) and methane (dark blue), a large share of the latter resulting from fossil fuel use, make up three-fourths of global greenhouse emissions. The climate emergency cannot be resolved unless emissions from fossil fuels are eliminated.




There is currently no policy for directly and rapidly reducing greenhouse emissions through pushing fossil-fuel use down to zero. There is only the implicit assumption that a rapid buildup of renewable energy sources will work through market forces to automatically drive out fossil energy. There is no evidence to support that assumption.

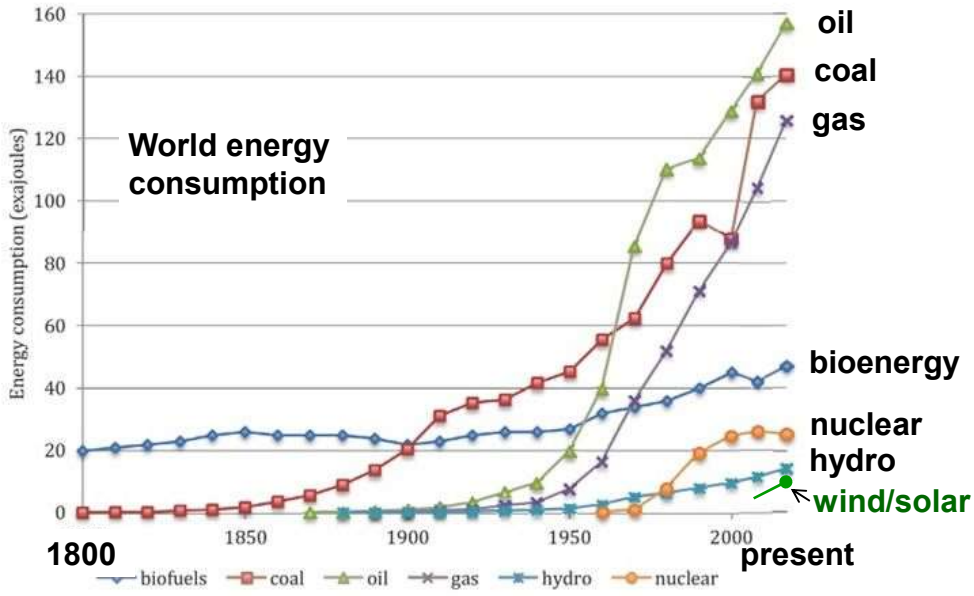
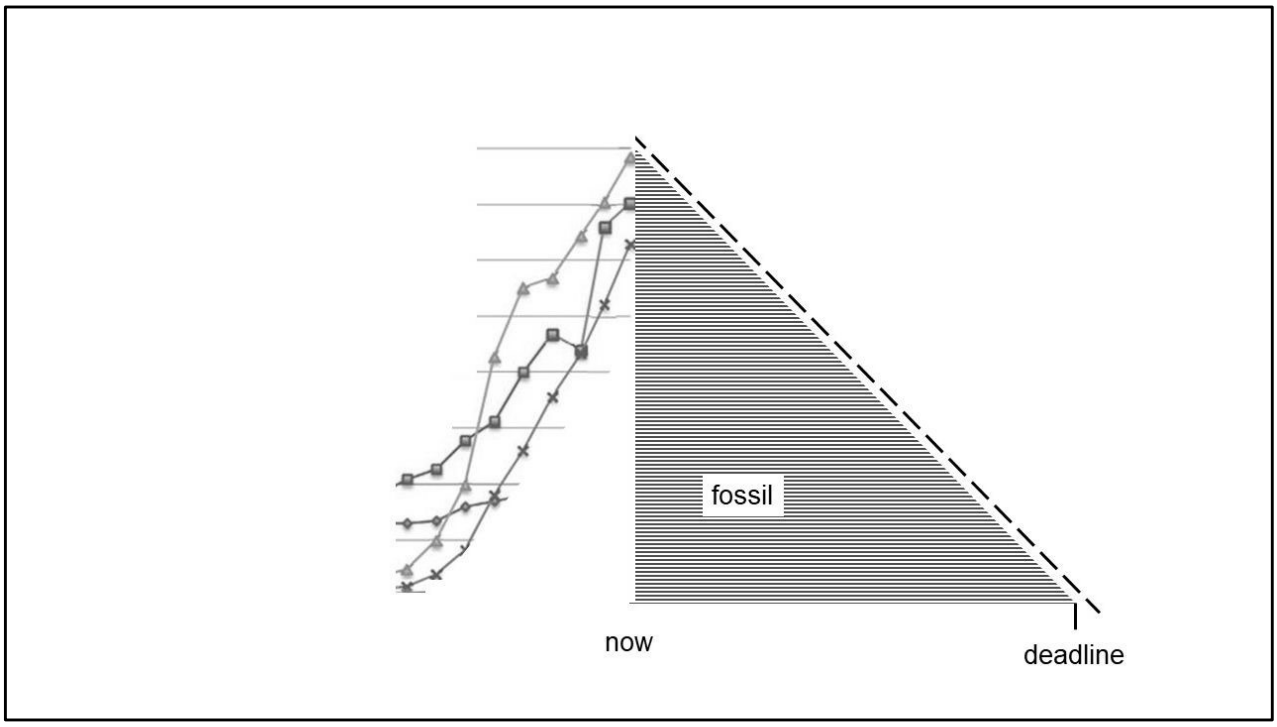


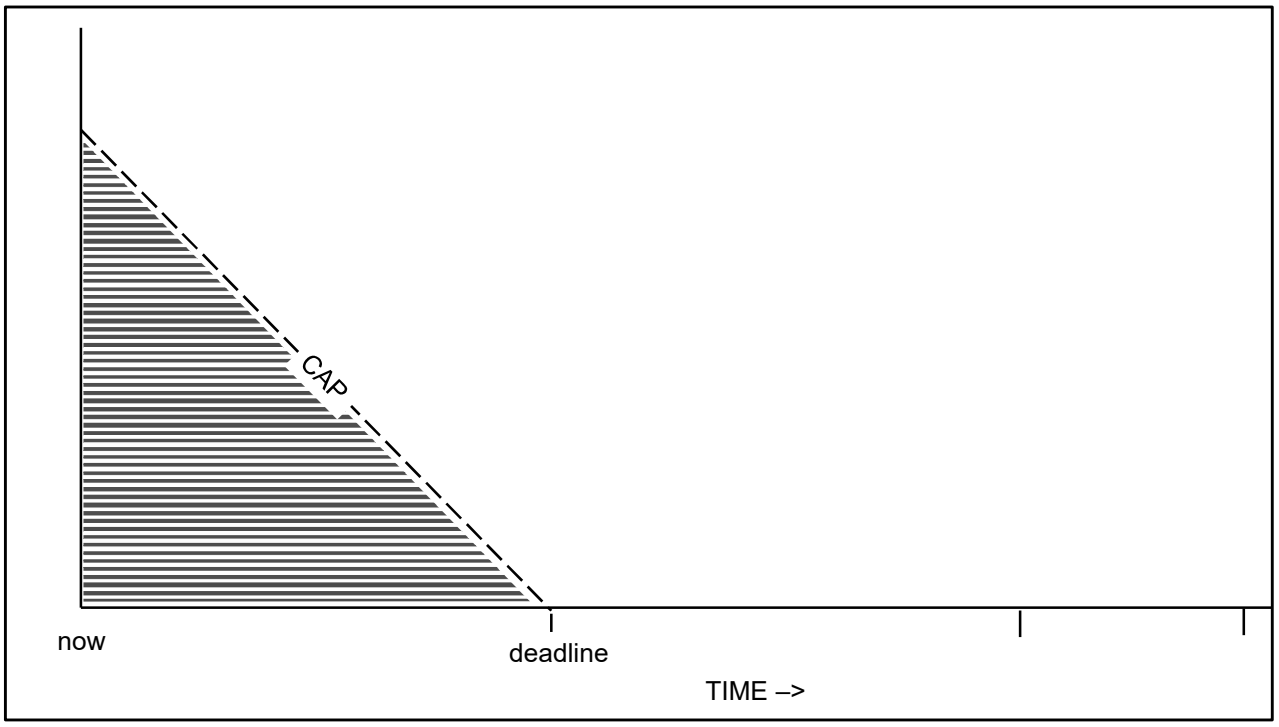

Fig. 2. Global energy consumption (exajoules) by source.1800–2017.

York & Bell, 2019

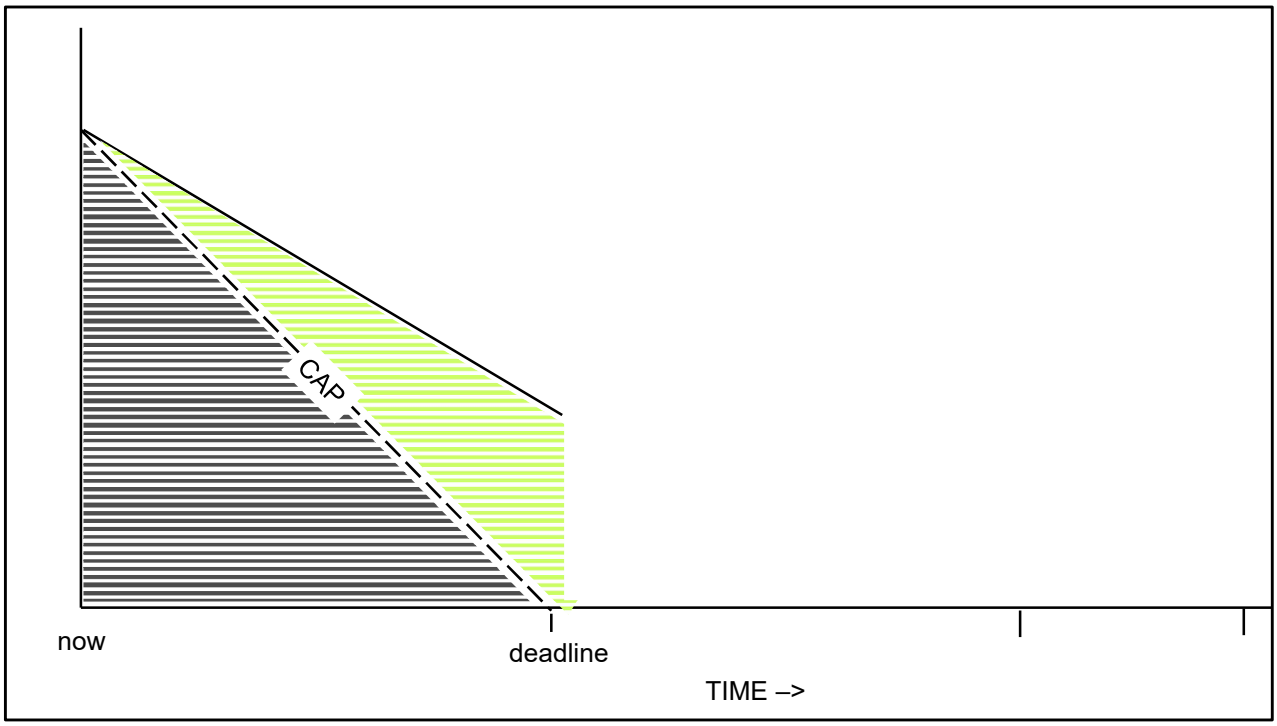
History shows that new energy sources typically add to the total energy pool, rather than replacing it. The use of coal continued to rise throughout the era when oil became dominant; oil consumption kept rising after World War II when natural gas took off; and the burning of oil and gas has continued to increase despite growth in solar and wind generation. Between 2009 and 2018, during a historically rapid buildup of U.S. wind and solar capacity, only one-fourth of the new output displaced electricity from fossil-fuel power plants; the other three-fourths went into increasing the total supply .



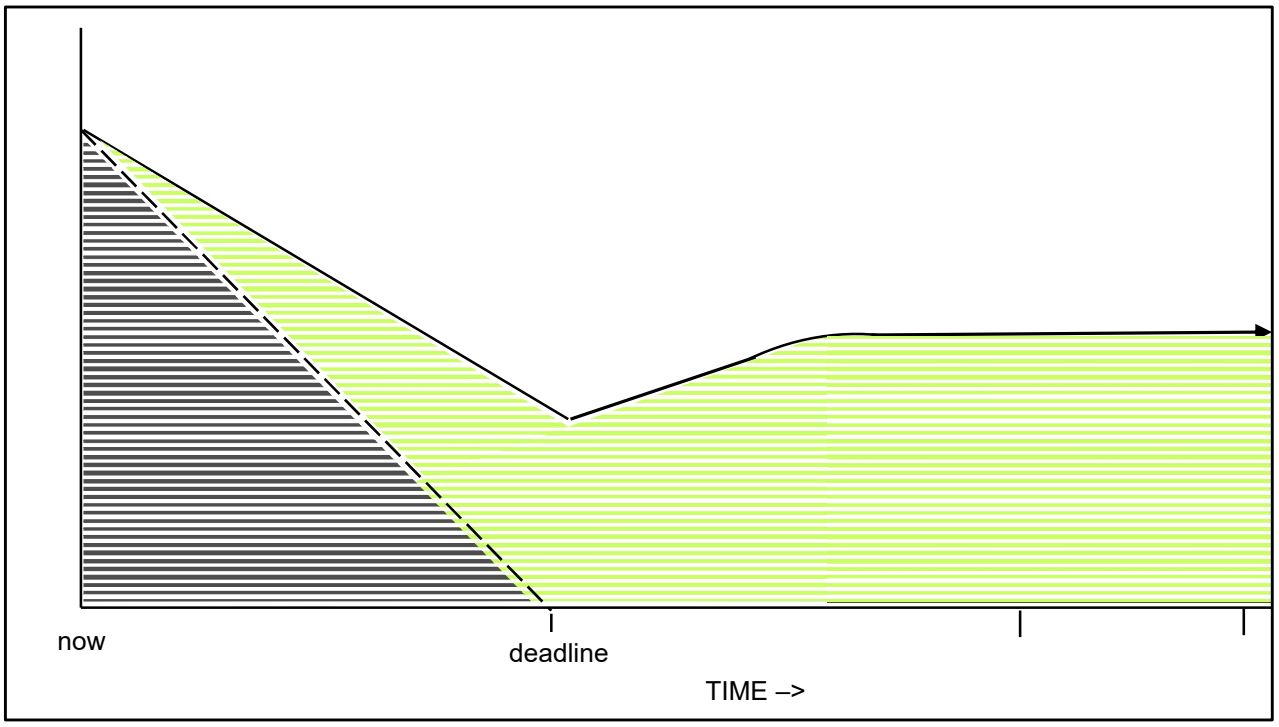

The intensifying symptoms of our climate predicament now require an immediate switch from the current steady rise in fossil-fuel use to a much steeper decline—something like doing a U-turn on Interstate 75 at 80 miles an hour in a tanker truck. There's no time left for legislating corporate-friendly policies and waiting to see if they work. If, in 2030 or 2040, such policies turn out to have been insufficient, it will be too late for a do-over.



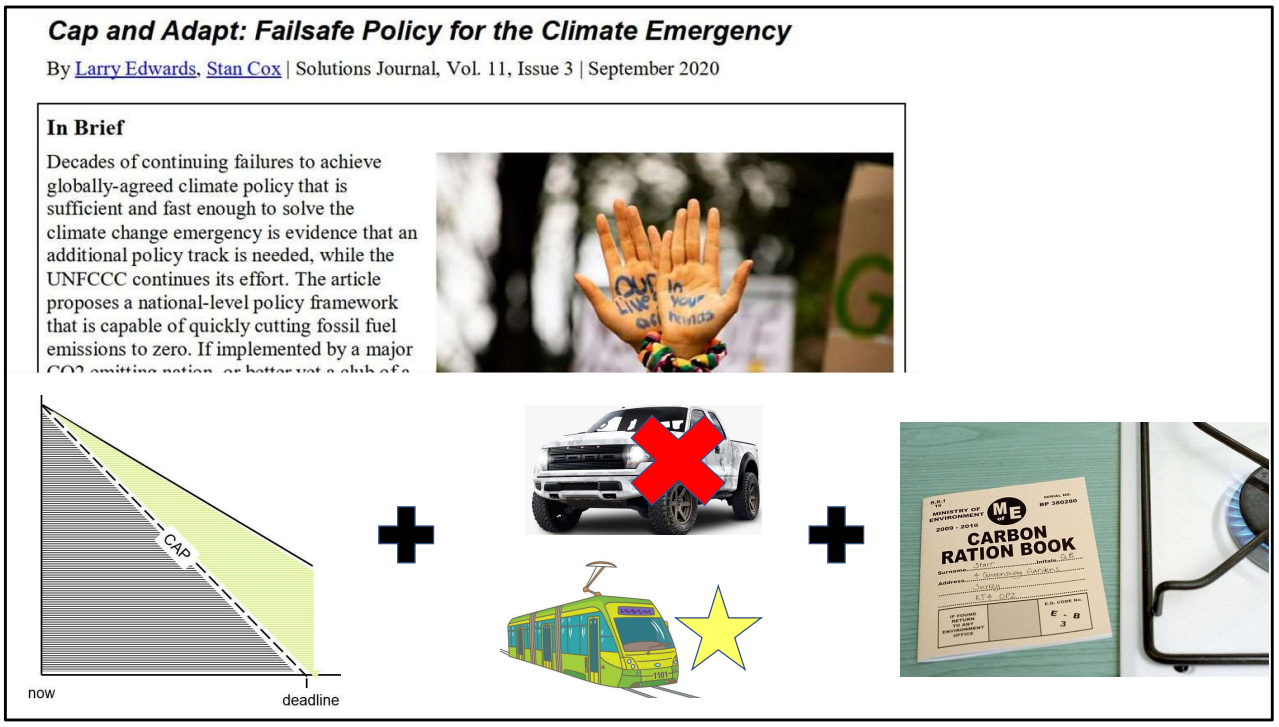

Fossil fuels cannot be suppressed solely through the expansion of non-fossil energy or through market interventions such as carbon pricing; eradicating emissions will require a statutory limit on all fuel extraction, one that lowers quickly year by year toward zero.



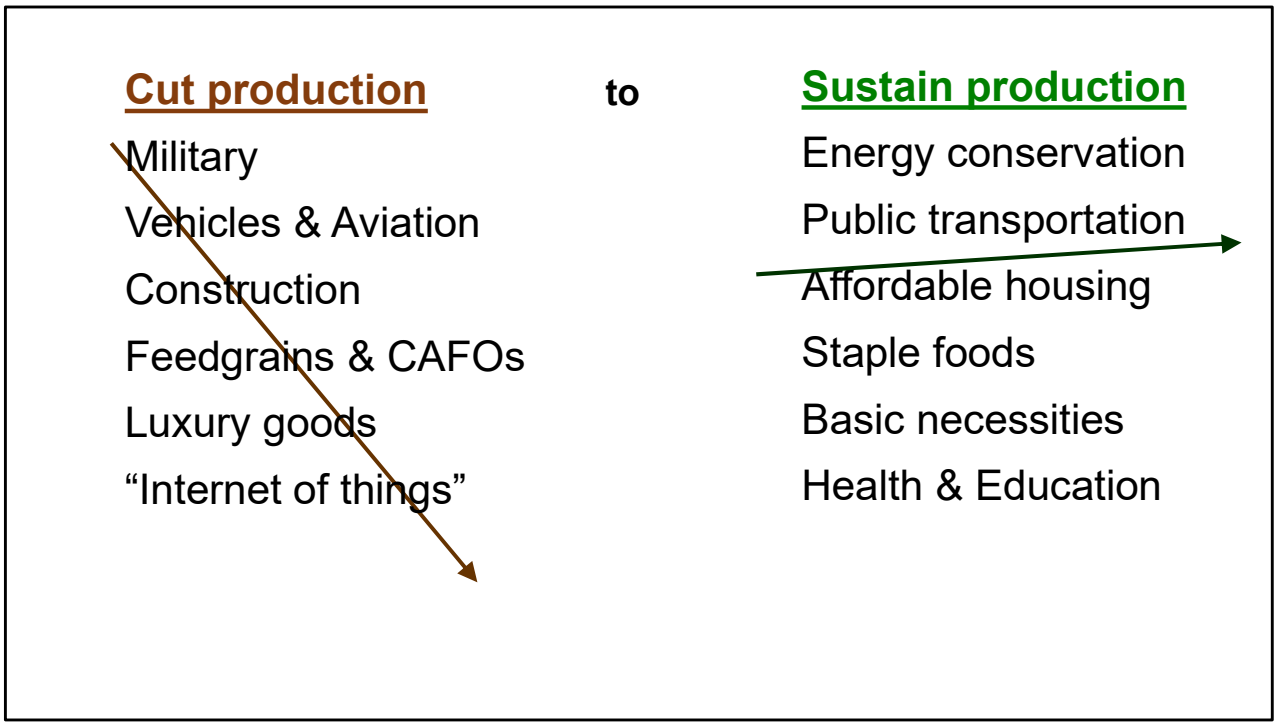

The authoritative UN Emissions Gap Report says global emissions must be reduced at a precipitous rate of 8 percent per year over the next decade. A cap that reduces oil, gas, and coal use must, therefore, decline at least that fast. And renewable energy capacity can't be built and deployed quickly enough to substitute fully for their retirement. A reduced energy supply will prevail during the transition.



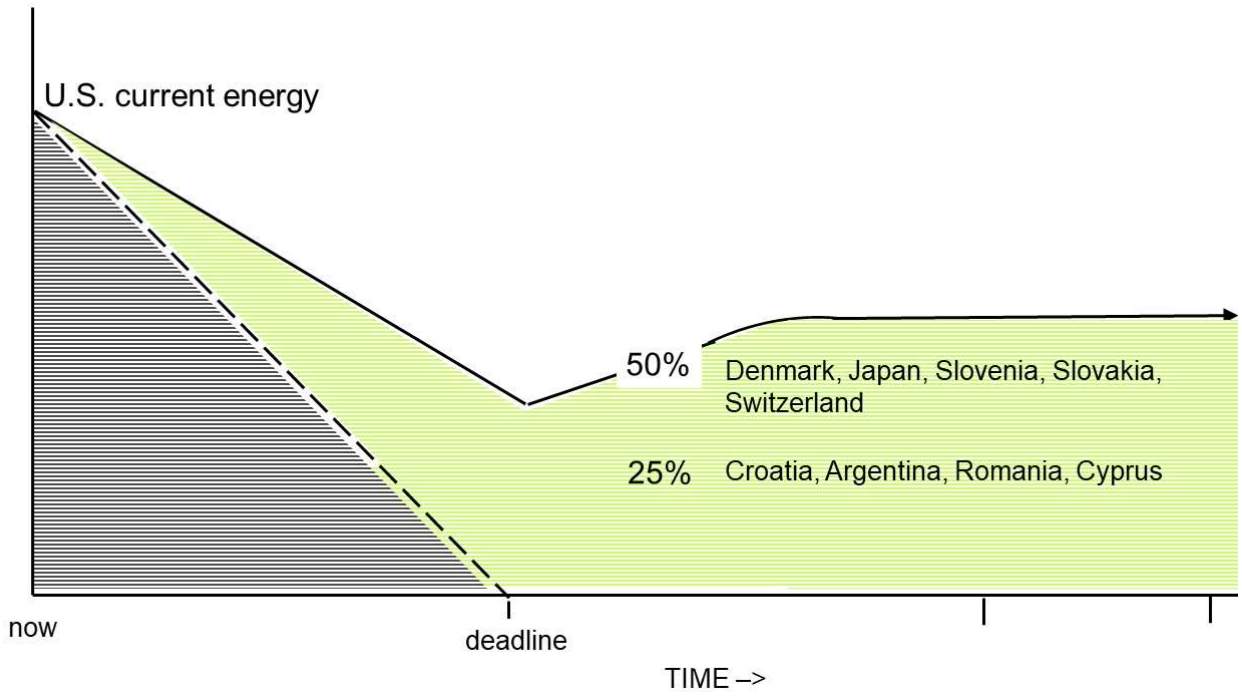

Renewable energy cannot and should not be scaled up to restore the currently huge U.S. energy consumption. One scenario purporting to achieve that goal would result in wind farms covering 6 percent of the entire land surface of the forty-eight contiguous states. Plans for “100 percent renewable” energy worldwide would require solar installation on at least as many square miles of the Earth’s surface as are now occupied by all food production and human settlement combined. One result might be “green sacrifice zones” in nations that have large deposits of cobalt, lithium, and other metals that go into the batteries and mechanisms essential to renewable electricity systems. Even if such extreme courses of action were possible, they would be ecologically unacceptable.




A declining cap on fossil fuels will create a need for planned allocation of energy sources to ensure production of essential goods and services, and to end wasteful production. To ensure consumers fair, sufficient access to fuel and electricity, price controls and rationing will probably be necessary




Energy and material resources must be directed toward supplying essential goods and services and away from harmful, wasteful, and superfluous production.




The line extending to the right depicts a future US living on 60% as much energy as we use today. Highly livable countries use only half as much energy, and even one-fourth as much. If energy demand nevertheless remains high in a future US with a deeply reduced energy supply, rationing will be required.

Note that the function of energy rationing is not to reduce consumption. It is the cap that reduces the amount of fuel coming out of the ground. Rationing is an adaptation to low supply, one that ensures sufficiency and fairness for all.