

RESPONDING TO CC DENIERS (CC=climate change, GW=global warming, GG= greenhouse gases, CO2= carbon dioxide)

SKEPTICS CLAIMS	YES, that's TRUE	BUT here is some addition information	OTHER USEFUL RESPONSES	SOURCES
GW is junk science. Some scientist disagree with it.	A few scientists and some representatives of the fossil fuel industry disagree with some part of climate science.		What part of CC science do you think is inaccurate?	"Responding to Doubting Thomas" by Iowa Senator Rob Hogg
		97% of scientists who study CC agree: 1) average global temp. is rising, 2) increasing carbon dioxide & other GG are driving it, 3) impacts will be more severe & we should act NOW.	At least 18 professional science organizations in USA have stated these facts, based on vast body of peer-reviewed science.	National Academy of Sciences— Climate Change: Evidence, Impacts and Choices. See booklet or website.
Carbon dioxide=plant food	TRUE	No one is advocating elimination of all carbon dioxide — just the excess that causes GW.		
Humans add only a small fraction of carbon dioxide	There are some natural sources, but we can't control those.	Nature absorbs most of the CO2 produced by natural sources.	Human activities that add excess GG can be managed.	
Water vapor is the primary greenhouse gas.	TRUE	GG added by humans lead to warming, which adds even more water vapor to atmosphere.		
In 1970s scientists warned of another ice age. Why should we believe them now?	A few scientists made that prediction, & slight short-term cooling from 1940-70 was caused by sulfur emissions from heavy industry.	Now scientists around the world have done rigorous, independent research and agree on at least the 3 points above.	Some GG prevent excessive global cooling—but we are causing excessive warming.	
We still have extreme cold and snow, so Earth is not warming.	Yes we do have extreme cold and snow.	GW adds moisture to atmosphere, which causes more extreme precipitation: snow, floods, hurricanes, which we see almost every night on TV.	GW disrupts weather patterns, leading to both extreme cold AND extreme heat. People are now dying from heat waves in England and Scandinavia.	
"Urban heat island effect" makes people believe in global warming.	Yes this does increase temperatures in urban areas.	It does NOT explain rising ocean temperatures, nor loss of sea ice.		
GW is caused by solar variation (SV) due to sun spots & solar winds.	SV contributes only a small fraction of warming measured to date.	SV contributes only 0.12 watts/sq.meter; human generated GG contribute 2.64 watts/sq. meter.	FYI: "solar variation" is the variable amount of energy emitted by the sun.	Scientific American— Earth Talk
GW is natural, not caused by human activities.	Natural causes have been thoroughly assessed and measured.	They don't account for GW measured to date.	Since Industrial Revolution temps have risen in correlation with CO2 emissions.	
Clouds will cool Earth and prevent Global Warming.	Clouds have cooled Earth by -0.70 watts per square meter.	This cooling is less than warming by GG=+2.64 watts/sq. meter!	Some cloud formations actually warm the Earth.	
Earth has natural cycle of warm and cold periods, so there's no problem.	Yes, variation is normal.	Temps are now rapidly increasing at rates unseen before the Industrial Revolution.	Current temps cause dire hardships for people and massive property destruction.	Just watch the evening news!
GW has positive impacts like warmer winters.	Yes, growing season is longer in Greenland & Canada—but they don't have adequate soils for high levels of food production.	Most impacts are negative & dire: ocean acidification, sea level rise, more extreme floods, hurricanes & typhoons; extended drought & desertification; changes in range of plants, animals & insects.	Sea level rise will flood many coastal cities, where most of the Earth's population lives. Extreme heat & drought causing massive wild fires, & will limit food production.	
Don't disrupt current systems. Wait and adapt.	We are finally beginning to adapt— after devastating events	Adapting will be more costly and difficult the longer we wait.	We must reduce & sequester GG; mitigate, slow, reverse GW	Drawdown , edited by Peter Hawken
Disasters have always occurred.	TRUE	GW is causing more frequent and severe disasters (see above).		
Policy solutions are worse than climate change.	Yes, we will have to modify our life-style a bit — but not drastically. Every little bit helps.	Clean energy & transportation will create jobs, support new businesses, improve health, lower energy costs.	Business as usual will irreversibly change environment, increase health & disaster costs, ruin economies.	
American should not have to change if China & India keep using fossil fuels.	Yes, all nations should move toward environmental sustainability.	Americans are only 4.28% of world's population, but we use 25% of world's coal, 26% of the oil, & 27% of the natural gas; so we should lead the way.	Wealthiest 16% (in USA, Europe, Japan) consume 80% of world's resources. The U.S. consumes 25 tons of raw materials/year for every person.	CNN's Garrick Utley.
Proposed policies are too weak to stop GW.	Yes, some are too weak, AND reversing the effective policies of the past is going in the wrong direction.	Drawdown: The most Comprehensive Plan Ever Proposed to Reverse Global Warming offers 100 scientifically based solutions, along with the impacts and costs.	Would you rather just ignore the problem, and wait for disaster as if we were helpless victims? Or would you rather implement current solutions and develop new ones?	Drawdown: The most Comprehensive Plan Ever Proposed to Reverse Global Warming
Policies to fight CC would take away our freedom.	Yes, some individuals and business will have to modify their ways.	But climate disasters will wreck even more havoc and take away more of our choices.	US military is already adapting to climate realities, and preparing for influx of migrants from disaster zones.	