**Climate Change: From Fossil Fuels to a Renewable Energy Future**

***Note: If a hyperlink is missing, come back to this site in a day or two***

**PDF of slide show: LINK to the above slide presentation (TBD)**

**Link to this web page:** [**http://www.sunpine.us/warm.htm**](http://www.sunpine.us/warm.htm)

**“The War on Science and its Adverse Consequences” LINK to suppl. presentation (tbd)**

**“Some Political Aspects of the Environmental Crisis and Global Warming” LINK (tbd)**

**Hyperlinks and references related to these presentations below**

● 25 October 2016 for Space Coast Science Education Alliance, Florida Solar Energy Center, Cocoa, Florida

● 1 November 2016 for Marine Resources Council, Indian River Lagoon, Lagoon House, Palm Bay, Florida

Presenter: William Ross McCluney, Ph.D., Principle Research Scientist, ret. Florida Solar Energy Center/UCF

See also <http://www.sunpineconsulting.com/> and <http://www.futureofhumanity.org>

The Space Coast Science Education Alliance (SCSEA), founded 19XX by Dr McCluney (FSEC), Mike Hutton, Brevard Community College Planetarium Director, and representatives of other science-related education organizations in the region. See: [www.spacecoastscience.org](http://www.spacecoastscience.org)

**Additional links of interest:**

Book listing at Amazon.com: *The War on Science* by Shawn Otto [LINK](https://www.amazon.com/War-Science-Waging-Matters-About/dp/1571313532)

Scientific American Article: “A Plan To Defend Against the War on Science” by Shawn Otto [LINK](https://www.scientificamerican.com/article/a-plan-to-defend-against-the-war-on-science/)

Article by Dr. McCluney: “Yes, We Can! A Path to 100% Renewables” [LINK](https://medium.com/p/35644816e557)

Article by Dr. McCluney: “The Cost of a 100% Conversion from Fossil Fuels to Renewable Energy” [LINK](https://medium.com/p/a0af77db212a)

**HYPERLINKS**

**Roughly in order of topic appearance in slide show**

**Climate Change: From Fossil Fuels to a Renewable Energy Future**

Paul Ehrlich I-PAT [LINK](http://www.sustainablescale.org/ConceptualFramework/UnderstandingScale/MeasuringScale) <http://www.sustainablescale.org/ConceptualFramework/UnderstandingScale/MeasuringScale/TheIPATEquation.aspx>

Species extinction rate [LINK](http://www.biologicaldiversity.org/programs/biodiversity/elements_of_biodiversity/extinction_crisis/)

 <http://www.biologicaldiversity.org/programs/biodiversity/elements_of_biodiversity/extinction_crisis/>

Killing coral [LINK](http://www.greenpeace.org/usa/whats-killing-coral-reefs-and-how-can-we-stop-it/)

 <http://www.greenpeace.org/usa/whats-killing-coral-reefs-and-how-can-we-stop-it/>

Fresh water declines [LINK](http://wwf.panda.org/about_our_earth/about_freshwater/importance_value/)

 <http://wwf.panda.org/about_our_earth/about_freshwater/importance_value/>

Disappearing forests LINK

 <http://www.greenpeace.org/international/en/campaigns/forests/solutions/our-disappearing-forests/>

Nature’s services under attack [LINK](https://en.wikipedia.org/wiki/Ecosystem_services)

 <https://en.wikipedia.org/wiki/Ecosystem_services>

Rare Earth metals declining [LINK](http://www.treehugger.com/clean-technology/chinas-rare-earth-reserves-declining.html)

 <http://www.treehugger.com/clean-technology/chinas-rare-earth-reserves-declining.html>

Mauna Loa continuous record [LINK](http://scrippsco2.ucsd.edu/graphics_gallery/mauna_loa_record/)

 <http://scrippsco2.ucsd.edu/graphics_gallery/mauna_loa_record/>

Carbon Emissions from industry [LINK](https://www.ncdc.noaa.gov/monitoring-references/faq/greenhouse-gases.php)

 <https://www.ncdc.noaa.gov/monitoring-references/faq/greenhouse-gases.php>

North America Carbon Emissions [LINK](http://cdiac.ornl.gov/trends/emis/nam.html)

 <http://cdiac.ornl.gov/trends/emis/nam.html>

Arctic sea ice melt [LINK](http://nsidc.org/arcticseaicenews/)

 <http://nsidc.org/arcticseaicenews/>

Land ice (glaciers) melting [LINK](http://www.yaleclimateconnections.org/2014/11/loss-of-land-ice-not-sea-ice-more-sea-level-rise/)1 [LINK2](https://www3.epa.gov/climatechange/kids/impacts/signs/glaciers.html)

 <http://www.yaleclimateconnections.org/2014/11/loss-of-land-ice-not-sea-ice-more-sea-level-rise/>

 <https://www3.epa.gov/climatechange/kids/impacts/signs/glaciers.html>

Skeptical about global warming? [LINK](https://www.skepticalscience.com/argument.php)

<https://www.skepticalscience.com/argument.php>

Drought in the West 2015 [LINK](http://drought.unl.edu/NewsOutreach/MonthlySummary/June2015DroughtandImpactSummary.aspx)

 <http://drought.unl.edu/NewsOutreach/MonthlySummary/June2015DroughtandImpactSummary.aspx>

Oceans get warmer, storms stronger [LINK](http://earthobservatory.nasa.gov/Features/ClimateStorms/page2.php)

 <http://earthobservatory.nasa.gov/Features/ClimateStorms/page2.php>

Tornadoes Earlier in Tornado Alley [LINK](https://news.agu.org/press-release/tornadoes-occurring-earlier-in-tornado-alley/)

 <https://news.agu.org/press-release/tornadoes-occurring-earlier-in-tornado-alley/>

*The War on Science* by Shawn Otto [LINK](https://www.scientificamerican.com/article/the-war-on-science-book-review/)

 <https://www.scientificamerican.com/article/the-war-on-science-book-review/>

 Order: <https://www.amazon.com/War-Science-Waging-Matters-About/dp/1571313532>

“A Plan To Defend Against the War on Science,” by Shawn Otto [LINK](https://www.scientificamerican.com/article/a-plan-to-defend-against-the-war-on-science/)

 <https://www.scientificamerican.com/article/a-plan-to-defend-against-the-war-on-science/>

Bloomberg New Energy PV Trend Chart: [LINK](https://commons.wikimedia.org/wiki/File%3APrice_history_of_silicon_PV_cells_since_1977.svg)

 [https://commons.wikimedia.org/wiki/File:Price\_history\_of\_silicon\_PV\_cells\_since\_1977.svg](https://commons.wikimedia.org/wiki/File%3APrice_history_of_silicon_PV_cells_since_1977.svg)

**U.S. Government Climate Program Links**

* **U.S. Government:** <http://www.globalchange.gov/>
* **NASA:** <climate.NASA.gov>
* **NOAA:** <https://www.climate.gov/>
* **DOE:** <http://www.energy.gov/science-innovation/climate-change>
	+ NREL: <http://www.nrel.gov/analysis/>
	+ LBNL: <http://eesa.lbl.gov/departments/climate-sciences/>
* **U. S. Dept. of Agriculture:** <http://www.globalchange.gov/agency/department-agriculture>
* **U.S. Dept HHS:**  [http://www.globalchange.gov/agency/department-health-human-services U.S](http://www.globalchange.gov/agency/department-health-human-services%20U.S)
* **EPA:** <https://www.epa.gov/climatechange>
* **NSF:** <https://www.nsf.gov/news/special_reports/climate/>
* **Smithsonian Institution:** <http://ecosystems.serc.si.edu/climate-change/>

**Private, Non-Profit, Climate Change Organization Links**

350.org<https://350.org/>

Union of Concerned Scientists <http://www.ucsusa.org/>

The Climate Reality Project <https://www.climaterealityproject.org/>

The Sierra Club <http://www.sierraclub.org/>

Greenpeace <http://www.greenpeace.org/usa/>

The Post Carbon Institute <http://www.postcarbon.org/>

Citizens’ Climate Lobby <http://citizensclimatelobby.org/>