Messenger

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MISSOURI CATHOLIC CONFERENCE

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Our Common Home

As Catholics, we are called to care for God's creation. To do so, we must first appreciate the natural beauty of our world, and then recognize that this beauty is vulnerable to climate changes. What is at stake for our environment and our world as global leaders meet to discuss efforts to significantly reduce carbon dioxide emissions to reach the goals set in 2015 in Paris? Find answers to this question and learn more about where our home state of Missouri currently gets its energy inside this MCC Messenger.

The Glasgow Climate Summit (COP26): What's at stake and what was accomplished?

The world's leaders recently met in Glasgow, Scotland to address climate change and to reassess the climate agreement reached in 2015 in Paris that resulted in the now-familiar "Paris Accord." In the 2015 "accord," 196 of the world's nations agreed for the first time to work together to reduce CO_2 emissions to limit global temperature increases to below 2 degrees Celsius from pre-industrial levels and aimed to limit increases to 1.5 degrees Celsius before the end of the century. Each country also agreed to present national plans setting out how they will work to reduce their emissions, plans known as Nationally Determined Contributions (NDCs). The countries promised to return every five years with updated plans reflecting their highest possible emission reduction ambitions. Glasgow was the first meeting held since the Paris agreement was reached; a 2020 meeting was rescheduled due to the COVID pandemic. Glasgow was the 26th "conference of the parties," and bore the name COP26.

Climate scientists have been warning for decades that the earth is warming due to the emission and accumulation of greenhouse gases in the atmosphere, created primarily by the burning of fossil fuels. The United Nations Intergovernmental Panel on Climate Change (IPCC) this fall released its 6th assessment report, stating that "it is unequivocal that human influence has warmed the atmosphere, ocean, and land," and that "the rate of warming is unprecedented in at least the last 2000 years." The IPCC report stated that "global warming of 1.5 degrees Celsius and 2 degrees Celsius [above pre-industrial levels] will be exceeded during the 21st Century unless deep reductions in CO_2 and other greenhouse gas emissions occur in the coming decades."

Organizers of COP 26 stated before the Glasgow meeting that this year's conference "needs to be decisive," and that countries "need to join forces urgently" to address this issue. They proposed four goals for this year's conference: secure global net-zero emissions by mid-century and keep 1.5 degrees Celsius within reach; adapt to protect communities and natural habitats; mobilize finance; and work together to deliver actual results.

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Professor Benjamin de Foy, Professor of Atmospheric Sciences and Banpu Chair of Sustainability in the Department of Earth and Atmospheric Sciences at St. Louis University talks the 2021 Glasgow Climate Summit: What is at Stake?"

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Securing global net-zero emissions by mid-century and keep 1.5 degrees Celsius within reach

The emission reduction plans submitted by the countries after the Paris Accord were not aggressive enough to achieve the goal of limiting emissions to 1.5 degrees Celsius above pre-industrial levels. In fact, the original plans submitted would result in global temperature increases of well above 3 degrees by the end of the century. Climate scientists have warned that emissions need to be cut in half over the next decade, and the world must reach net-zero emissions by mid-century, to achieve the 1.5 Celsius goal.

According to organizers of the event, especially important to reaching this goal is rapidly phasing out coal-fired power plants and committing to not opening or financing new ones. In addition, protecting forests (which act as carbon sponges) and making the switch to zero emission cars, vans, and trucks are both critical to reaching this goal. In recent months, the G7 countries that account for approximately half of the global economy (Canada, France, Germany, Italy, Japan, the UK and the US) have each submitted new NDC targets for 2030 that put them on the path to net-zero emissions by 2050, which is encouraging news. These targets, however, need to be reached for the plans to be effective in reducing emissions. Moreover, even if the G7 countries make good on their pledges, their emission reductions would only represent a fraction of the reductions needed.

Adapting to protect communities and natural habitats

The effects of climate change are impacting people now. More intense storm systems, heatwaves, wildfires, and floods are having devastating impacts on people throughout the world, including in the U.S. Those with fewer resources to respond suffer the greatest impact from these events because they don't have the means to respond and recover. Needed changes include restoring natural buffers and habitats and investing in mitigation strategies to help lessen the impact of climate change. COP26 organizers called upon nations to communicate best practices and strategies to help every nation adapt and respond to these events.

Mobilize Finance

Going into the Glasgow summit, COP26 organizers challenged the leaders of the world to recognize that to achieve emission reduction goals, the global economy needs to shift. This shift will require companies, banks, financial firms, and nations to move investments from fossil fuels to clean energy alternatives, and to provide funding to developing nations to help them weather these changes and adopt the technology necessary to effect change. "[E]very financial decision needs to take climate change into account," COP26 organizers proclaimed before the event, because financial support for these changes is going to be essential if the goals of the Paris Accord are going to be realized.

Work together to deliver

Another focus for organizers of COP26 was brokering further agreements that would drive ambition from the leaders of the world to keep 1.5 degrees Celsius alive. But governments cannot do this work alone; business and civil society must work together with government agencies to transform the way we power our businesses and homes, grow our food, develop infrastructure, and move ourselves and our goods from place to place. This is a great challenge, but it is also an opportunity to invest in our future and the future of our children.

What was accomplished?

COP26 ended with 200 nations agreeing to a new climate "pact" that on its face keeps 1.5 degrees Celsius alive and finalizes elements of the Paris agreement. Many delegates were disappointed, however, that the pact did not go as far as organizers had envisioned. The pact includes agreements to reduce the use of fossil fuels, increase the financial commitments wealthy nations offer to developing nations to help them adapt, and finalizes the rules for establishing carbon markets and offset programs. The pact also includes commitments to halt deforestation and for each country to submit renewed emissions cutting pledges (NDCs) by 2022 rather than by 2025.

In the final minutes of negotiations, India insisted that language in a draft pact calling for the phasing out of coal and fossil fuel subsidies be changed to "phasing down coal," raising objections from many of the delegates present. The language change was agreed to, however, to get the pact signed and end the conference on a positive note. Acting COP26 President Alok Sharma stated at the close of the event that "we have kept 1.5 Celsius alive. But, its pulse is weak and it will only survive if we keep our promises and translate commitments into rapid action." Since we have already reached 1.1 degree Celsius (2 degrees Fahrenheit) of warming above pre-industrial levels, it remains to be seen whether these commitments will be fulfilled in time to avoid warming above 1.5 degrees.

Pope Francis, Patriarch Bartholomew, and Archbishop Welby issue "A Joint Message for the Protection of Creation"

In anticipation of COP26, Pope Francis issued a joint statement along with Ecumenical Patriarch Bartholomew, the Archbishop of Constantinople (spiritual leader of the Eastern Orthodox Church), and Justin Welby, the Archbishop of Canterbury (senior bishop of the Church of England) on September 1st calling for action on climate change. The spiritual leaders called upon everyone "whatever their belief or worldview, to endeavour [sic] to listen to the cry of the earth and of people who are poor, examining their behavior and pledging meaningful sacrifices for the sake of the earth which God has given us."

They offer challenging words when it comes to our collective past care for creation, stating that we have "maximized our own interests at the expense of future generations. …many of us behav[ing] in ways which demonstrate little concern for other people or the limits of the planet." As a result, they state, "[t]oday, we are paying the price. The extreme weather and natural disasters of recent months reveal afresh to us with great force and at great human cost that climate change is not only a future challenge, but an immediate and urgent matter of survival."

"This is the first time that the three of us feel compelled to address together the urgency of environmental sustainability, its impact on persistent poverty, and the importance of global cooperation. Together, on behalf of our communities, we appeal to the heart and mind of every Christian, every believer, and every person of good will. We pray for our leaders who will gather in Glasgow to decide the future of our planet and its people. Again, we recall scripture: 'choose life, so that you and your children may live.' (Dt. 30:19). Choosing life means making sacrifices and exercising self-restraint."

"All of us – whoever and wherever we are – can play a part in changing our collective response to the unprecedented threat of climate change and environmental degradation. Caring for God's creation is a spiritual commission requiring a response of commitment. This is a crucial moment. Our children's future and the future of our common home depend upon it."

Forests: About one-third of Missouri is forest covered, boasting a variety of trees, dominated primarily by oak (largely used to make wine barrels for local and global wineries) and hickory trees. Increased temperatures and drought could reduce forest productivity and make trees susceptible to disease and insects; a warmer climate also would likely increase the percentage of pine trees, but reduce the amount of hickory trees.

Rivers and Streams: Missouri is home to the Mississippi and Missouri rivers, and many other tributaries, streams, and springs. These watersheds provide transportation for goods, water for irrigation, and opportunities for recreation. In the last decade, Missouri has experienced both drought with reduced navigation channels (2012-13) and damaging flooding (2011, 2015).

Missouri's Natural Resources

Missouri has abundant natural resources which could be adversely affected by changes in climate. As global temperatures rise, scientists expect Missouri to experience more days with temperatures above 95 degrees, as well as more intense storm systems associated with increased humidity and larger rainfall, leading to heat waves in certain seasons and flooding in others.

"The natural environment is a collective good, the patrimony of all humanity and the responsibility of everyone." – Pope Francis, Laudato Si, No. 95

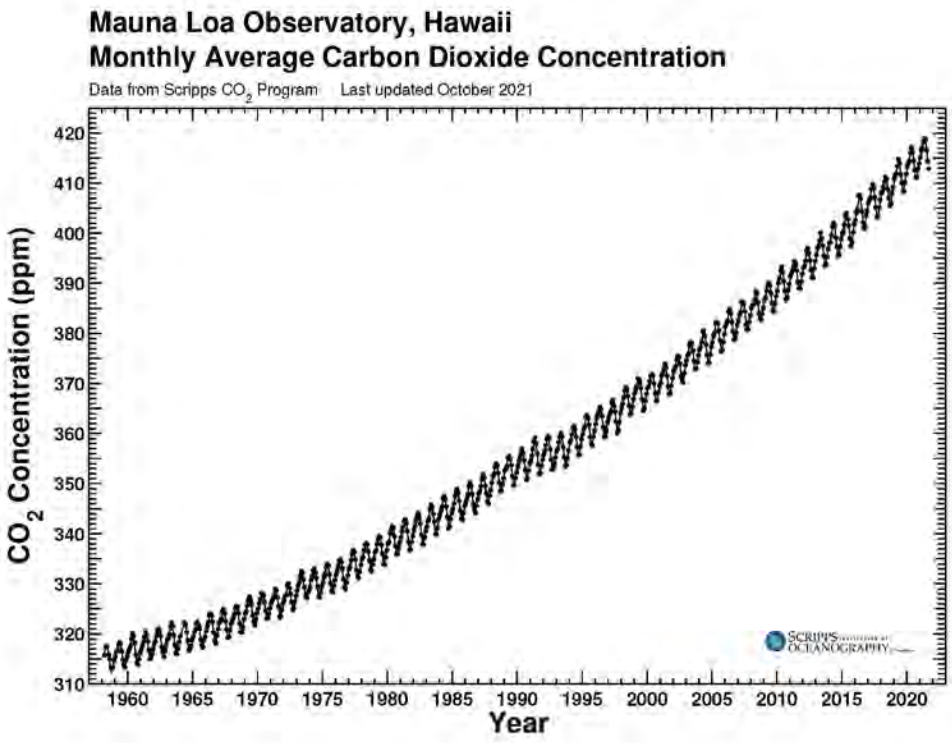
Agriculture: Farming and agriculture are staples of Missouri's economy and provide jobs and livelihoods for families and rural communities. Row crops like corn and soybeans require sufficient rainfall to thrive, but can also be adversely impacted by drought or, alternatively, too much rainfall. Hot weather can also negatively impact the growth and well-being of livestock like cows and other farm animals.

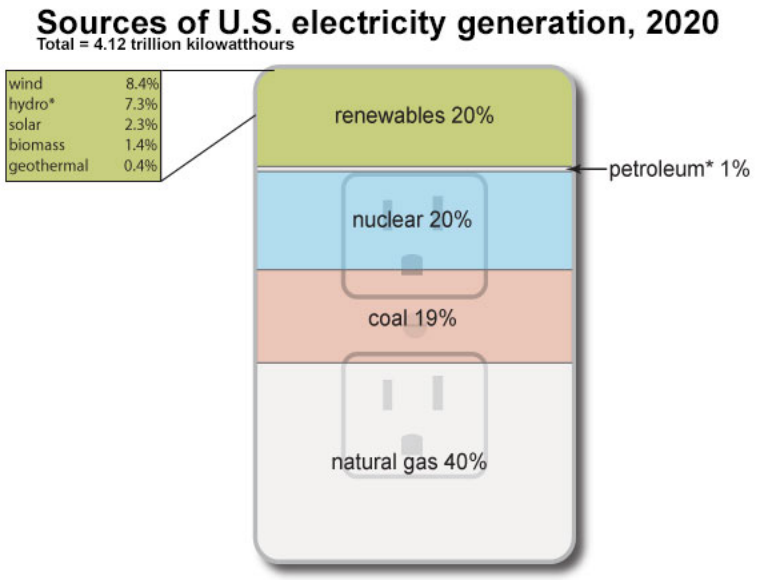
The Keeling Curve

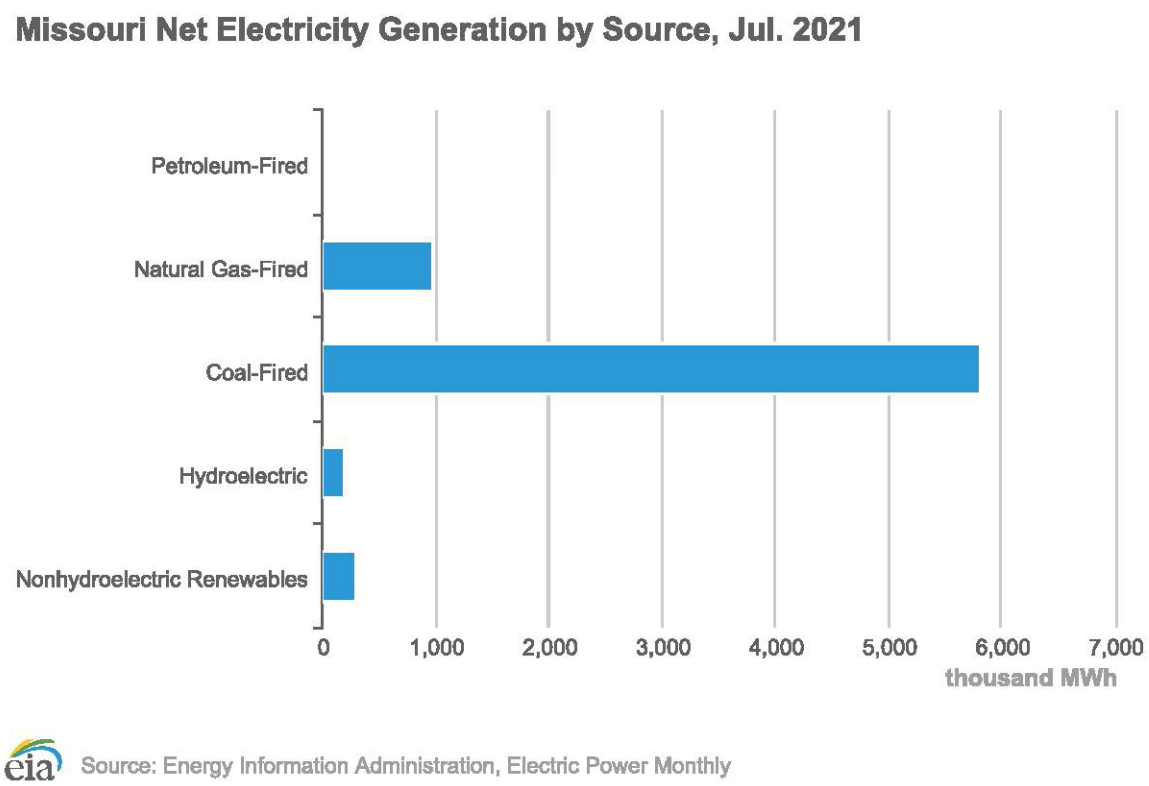
The Keeling Curve is a graph (shown right) that shows the average monthly amount of CO_2 measured in the atmosphere at the National Oceanic and Atmospheric Administration's observatory on Mauna Loa in Hawaii. Climate scientists look to the data from this observatory, located as it is in the center of the Pacific Ocean away from pollution centers, as a baseline measure of Northern hemisphere CO_2 concentrations year-to-year. Concentrations of CO_2 in the atmosphere above Mauna Loa have been increasing each year for the last 61 years these measurements have been taken, most recently reaching its highest monthly average ever at 414 ppm (parts per million).

Missouri's Power Grid Relies Heavily on Coal

According to the U.S. Energy Information Administration,Missouri generates approximately 77% of its electricity from coal-fired plants (shown below), second only to Texas. As a nation, the U.S. generated 60% of the electricity consumed in 2020 by burning fossil fuels (natural gas, coal, and petroleum). The remaining 40% was produced by nuclear power and renewable energy sources. (See chart to right.) Ameren UE and Evergy, the energy companies serving the largest energy markets in St. Louis and Kansas City respectively, have both publicly committed to reaching net-zero carbon emissions by 2050. Ameren, for example, operates four coal-fired power plants around the St. Louis area, each of which it plans to phase out between 2022 and 2042. Environmentalists argue that these closures need to happen sooner, as we are facing threatening climate changes now.







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"There is an urgent need to develop policies so that, in the next few years, the emission of carbon dioxide and other highly polluting gases can be drastically reduced, substituting for fossil fuels and developing sources of renewable energy." – Pope Francis, Laudato Si, No. 26