President Obama and Chinese President Xi Jinping announced a major deal on climate change this morning. As summarized by the Washington Post,

China, the world's biggest emitter of greenhouse gases, pledged in the far-reaching agreement to cap its rapidly growing carbon emissions by 2030, or earlier if possible. It also set a daunting goal of increasing the share of non-fossil fuels to 20 percent of the country's energy mix by 2030.

Obama announced a target to cut U.S. emissions 26 to 28 percent below 2005 levels by 2025, the first time the president has set a goal beyond the existing 17 percent target by 2020.

Because the two countries account for nearly half of current CO2 emissions, this agreement could be a game-changer for global negotiations. It also provides additional support for efforts by other actors — ranging from California to the European Union — by providing greater assurance that their efforts will not be undercut by increased emissions elsewhere.

The targets are lower than climate scientists would like, but still require very major reductions. The U.S. will have to double its pace of carbon emissions. As Secretary of State Kerry points out in the NY Times, the Chinese "will need to deploy an additional 800 to 1,000 gigawatts of nuclear, wind, solar and other renewable generation capacity by 2030 – an enormous amount, about the same as all the coal-fired power plants in China today, and nearly as much as the total electricity generation capacity of the United States." Some experts argue that China could do even more, and perhaps the current agreement will be a stepping stone toward more serious reductions on both sides.

Regardless, this deal is very good news. It's the biggest sign of real progress that we've seen since the Copenhagen climate summit shortly after Obama took office.

Addendum: Look here for more details on the agreement.