

Major steps needed on climate change, U.N. panel says

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A United Nations science panel issued a sobering wake-up call to world policymakers Sunday, warning that countries must make dramatic changes in their energy consumption, their use of technology and even their ways of life to avert the catastrophic effects of climate change.

The only options that stand a chance of heading off the worst of the harm would require cutting at least slightly into economic growth in the coming decades, the Intergovernmental Panel on Climate Change said. Nations may even have to make ambitious attempts to remove carbon pollution from the atmosphere — not just limit how much comes out of smokestacks and tailpipes.

The highly anticipated report's 37-page summary for policymakers doesn't offer a precise dollar figure of how much all this will cost. But it warns that half-measures won't cut it, and time is running out.

(Also on POLITICO: [Climate panel: Time to act is now](#))

"There is a clear message from science: To avoid dangerous interference with the climate system, we need to move away from business as usual," Germany's Ottmar Edenhofer, one of the three co-chairs of the report, said in a statement.

But the panel warned that "only major institutional and technological changes" have a chance of limiting the rise in global average temperatures to 2 degrees Celsius above pre-industrial levels — the target that scientists say could limit the most dramatic effects of climate change. Without action, the report says, the temperature is set to rise by as much as 4.8 degrees by 2100.

Indeed, world leaders face major hurdles as they try to implement wide-ranging policies to rein in runaway greenhouse gas emissions. International climate talks have been mired by disagreements between rich and poor nations, making it uncertain whether they can reach their goal of achieving a global agreement by the end of 2015.

In the U.S., President Barack Obama's proposed greenhouse gas regulations face attacks in Congress, where many Republicans don't believe climate change is a major problem.

[\(Also on POLITICO: Fox News 28 percent accurate on climate change\)](#)

The IPCC's report outlines a series of options for tackling climate change, including slashing emissions from electricity generation, boosting energy efficiency, increasing investments in wind, solar and nuclear power and eliminating subsidies for fossil fuels.

More ambitious steps include "carbon dioxide removal" technologies, though the report said those "carry side-effects and long-term consequences on a global scale" and it's uncertain how much CO₂ those could remove by the end of the century.

[\(Also on POLITICO: W.H. methane strategy next step in climate plan\)](#)

How big is the challenge? To have a chance of limiting the temperature rise to 2 degrees, countries must cut greenhouse gas emissions by 40 percent to 70 percent compared with 2010 levels by the middle of the century — and to near-zero by 2100, the report says.

Existing efforts to take on the problem aren't enough. The report says global emissions levels increased more rapidly between 2000 and 2010 than they had in any of the three previous decades.

And delaying major efforts through 2030 would "substantially increase the difficulty of the transition to low longer-term emissions levels and narrow the range of options" for staying below the 2-degree target, the report says.

The estimated costs of countering the effects of climate change "vary widely" depending on the scenarios modeled, the report says, but they translate to bites out of the global economy.

Under a business-as-usual scenario, the IPCC projects that global consumption will grow 1.6 percent to 3 percent per year through 2100. An ambitious climate strategy would reduce that growth by an average of 0.06 percent per year, according to the report — translating to a total of 4.8 percent in reduced consumption in 2100.

Still, Secretary of State John Kerry argued in a statement that it's possible to take on climate change while boosting the economy, asserting that the report "shines a light on energy technologies

available right now to substantially reduce global emissions.”

“We already know that climate science is unambiguous and that every year the world defers action, the costs only grow. But focusing only on grim realities misses promising realities staring us right in the face,” Kerry said. “This report makes very clear we face an issue of global willpower, not capacity.”

The World Resources Institute also struck an optimistic tone.

“The challenge is great, but we still have time to turn back this global threat,” Jennifer Morgan, WRI’s climate and energy program director, said in a statement. “The IPCC offers cost-effective options to change course and avoid locking-in even more dangerous levels of warming.”

Sen. Barbara Boxer (D-Calif.), chairwoman of the Environment and Public Works Committee, said the bottom line is clear: “The longer we wait to act, the harder and more expensive it will be.”

Sunday’s report is the latest in a series of reports that make up the IPCC’s fifth climate change assessment. The reports, reviewed by hundreds of experts, amount to one of the most comprehensive analyses of climate change science ever undertaken.

As part of the assessment, the IPCC released a report last month that **warned** that climate change threatens to reduce crop yields, wipe out poor people’s livelihoods, inundate low-lying lands, worsen droughts and possibly even increase the risks of wars. The group issued a report on the physical science of climate change in September. It will release a final synthesis report in October.

The report comes as the U.S. and other nations work toward reaching a new global climate agreement by the end of 2015 that would take effect starting in 2020. Obama, aware that the United States must show other countries it is willing to lead on the issue, unveiled a wide-ranging **climate change plan** in June. The centerpiece of that plan is greenhouse gas regulations for new and existing power plants — but, bowing to the realities on the Hill, it doesn’t envision any major steps by Congress.

The IPCC report outlines a number of options for tackling climate change, including:

- **Energy supply:** Effective action requires slashing emissions from power plants by effectively phasing out fossil fuel

generation by 2100 — except for plants that capture and store their carbon pollution — and dramatically ramping up reliance on renewable energy, nuclear power and fossil fuels with carbon capture. One strategy could include shifting from coal-fired power to natural gas, as long as the gas industry's methane emissions can be reduced. While the report touts carbon capture and storage, it notes that the technology “has not yet been applied at scale to a large, operational commercial fossil fuel power plant.”

- **Transportation:** Increased vehicle efficiency, improved transportation infrastructure and better urban planning could help.
- **Buildings:** The report touts low-energy building codes, retrofits and reductions of energy use for heating and cooling.
- **Industry:** “The energy intensity of the industry sector could be directly reduced by about 25% compared to the current level through the wide-scale upgrading, replacement and deployment of best available technologies, particularly in countries where these are not in use and in non-energy intensive industries,” the report says.
- **Forestry:** The report says the most effective policies include reducing deforestation, carrying out sustainable forest management and cultivating new forests.