

Eyes in the sky project will show power plant pollution marks

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Credit: CC0 Public Domain

Air pollution is responsible for millions of deaths every year, worldwide. According to a State of Global Air report, air pollution is the fifth greatest global mortality risk.

"[Air pollution](#) is the fifth highest cause of death among all health risks, ranking just below smoking; each year, more people die from [air pollution](#) related disease than from road traffic injuries or malaria."

No wonder, then, that when Google.org issued an open call to organizations around the world to submit ideas for how they could use AI for societal challenges, Google chose one of the 20 winning organizations as one that was out to address pollution.

"We looked for projects across a range of social impact domains and levels of technical expertise, from organizations that are experienced in AI to those with an idea for how they could put their data to better use."

Enter WattTime, with goals to unleash image processing algorithms and satellite networks—for a monitoring platform of power plant emissions. And this was going to be realtime.

WattTime earlier this month announced a new project, funded by a \$1.7 million grant from Google.org.

"[Billions](#) of dollars have been spent building monitoring systems to measure the emissions of major fossil fuel power [plants](#)," said the WattTime intro on the Google impact challenge site. "These monitoring systems make critical emissions reduction initiatives possible but are not accessible in communities that cannot afford them."

So, no, they would not be the first but WattTime would be significant in monitoring every plant around the globe. Without WattTime, as David Roberts, *Vox*, said "poor monitoring and gaming of emissions data have made it difficult to enforce pollution restrictions on power plants. "

WattTime's public database will track air pollution from all the world's large power plants. Considering it will be doing so realtime and making

the data available, it is not difficult to agree with *Vox* that this is "a very big deal."

What is more, WattTime will be "a trusted, third-party source of verified information on every power plant," said WattTime. The tracking system's information could play its role in helping to hold polluting plants accountable to environmental standards.

"[Every](#) pollution law or international agreement relies on monitoring and verification. Many countries, or areas within countries, are suspected of underreporting emissions."

In *Vox*, Roberts said, "Sensors that can directly track NO₂ emissions are in development, according to WattTime executive director Gavin McCormick."

Roberts said the data will come from a variety of sensors operating at different wavelengths, including thermal infrared that can detect heat.

Gizmodo, meanwhile, had more information about who, in addition to WattTime, would be helping the project: "Carbon Tracker, a think tank that focuses on the financial part of transitioning away from [fossil fuels](#); and the World Resources Institute (WRI), which focuses on how the world can live sustainably."

Yessenia Funes reported that "a coalition of groups is turning to satellites and [AI](#) technology to help monitor emissions from all the world's power plants."

Nonetheless, Funes mentioned some limitations. Clouds can mess with images, "so the quality of the data gathered varies. The satellites can't measure what kind of pollutants are being emitted, or how much exactly. They can provide estimates, though, and that's better than nothing in

places where the data just doesn't exist."

Funes said, "The groups are still figuring timelines, but the next couple of years may be tough on fossil fuel companies hoping to go about business as usual. The eye in the sky will be watching, and it will be judging."

More information: www.watttime.org/

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