A Climate-Change Policy that Pays for Itself
By Patrick Decker, President and CEO, Xylem Inc.

Right now, government officials from more than 150 nations are meeting in Paris to forge a plan for reducing greenhouse-gas emissions. Among the most difficult issues they're grappling with is how best to finance the transition to a clean-energy infrastructure, particularly in developing countries.

They should start by identifying existing tools that can dramatically reduce carbon pollution even as they save money.

Many of the most popular approaches for cutting emissions, such as cap-and-trade schemes, are difficult to implement and can stunt economic growth. Fortunately, not all strategies for scaling back emissions carry significant economic costs.

Consider the building sector, which produces about 18 percent of the globe's greenhouse gases. In developing countries, residential and commercial buildings are responsible for more than 30 percent of emissions. Absent action, by 2030, building-related emissions could increase by half over 2005 levels.

But energy-efficiency technologies that are already commercially viable could cut annual emissions from these buildings by 28 percent. McKinsey, a consultancy, projects that investments in these technologies would more than pay for themselves, as energy-efficient buildings consume less energy -- and thus have lower utility bills.

The wastewater sector, which treats used water so it can be returned to the environment, offers another instructive example.

Producing the electricity that's used in wastewater management worldwide generates 86.3 million metric tons of carbon emissions a year. That's higher than the total annual emissions of many developed countries, including Austria, Finland, and New Zealand.

The energy-inefficient equipment used at every step of the treatment process deserves much of the blame for this pollution. The pumps used to transport water, the blowers that aerate it, and the filtration systems that treat it are all woefully out of date.

Replacing this equipment with more current, energy-efficient tools could cut global electricity emissions from wastewater treatment by 50 percent, according to Powering a Wastewater Renaissance, a recent analysis conducted by researchers at Xylem – the company I lead – and Vivid Economics.

That would be equivalent to taking 11.4 million cars off the road.

The economics of this upgrade are equally impressive. Since a revamped wastewater sector would consume less energy, 95 percent of these emissions reductions would either pay for themselves or result in net savings.

These net savings -- which amount to some $40 billion over the life of the equipment -- could be channeled into additional upgrades to our outdated water infrastructure or reduce bills to consumers.

A big chunk of those savings could accrue to China -- at no cost. Just by making its wastewater-treatment infrastructure more energy-efficient, China could realize $25 billion in economic savings -- and reduce emissions from its wastewater sector by 59 percent.

Such an effort would significantly boost the emissions-reduction program to which Chinese President Xi Jinping committed his nation earlier this year.

In general, wastewater facilities do not have excess capital to invest in renovations unless they're required to do so. Fortunately, there's plenty more they can do to accelerate the transition to more efficient wastewater technologies.

The United States and Europe have already mandated that wastewater-management facilities install more efficient wastewater pumping equipment in the near future. But government officials should consider requiring the wastewater sector to implement additional energy-saving improvements, like variable-speed blowers and more sophisticated filter controls.

By further reducing energy usage, such rules could deliver even greater environmental and economic benefits. Global policymakers should also consider ways to encourage developing economies, which are rapidly installing new wastewater-treatment infrastructure, to adopt similar standards.

Examples like these prove that existing technologies can cut emissions without inflicting economic harm. And that's an outcome that the negotiators in Paris should be able to endorse.