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# Fixing the Foul Play

Mitigating the Environmental and Public Health Damage Caused by the Volkswagen Emissions Scandal

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# Introduction and summary

State and federal agencies continue to investigate Volkswagen's alleged efforts to cheat on emissions tests in the United States. As the investigations come to a close, the U.S. Environmental Protection Agency, or EPA, should consider how to resolve this scandal in a way that both mitigates the public health and environmental damage caused by Volkswagen's actions and builds momentum toward a cleaner transportation sector.

On January 4, 2016, the Department of Justice, or DOJ, on behalf of the EPA, filed a civil complaint against Volkswagen and two of its subsidiary companies, Audi and Porsche, in federal court. In the complaint, the DOJ alleges that the company installed software in certain light-duty diesel passenger vehicles that allows those vehicles to circumvent emissions testing, violating the Clean Air Act. The DOJ states that Volkswagen installed this device in approximately 499,000 2.0-liter and 85,000 3.0-liter vehicles.<sup>1</sup> The California Air Resources Board, or CARB, which first started examining these allegations in 2014, also is pursuing enforcement action.<sup>2</sup>

The defeat device in question detects when the vehicle is undergoing emissions testing. During this testing, the vehicle activates full emissions controls for pollution from nitrogen oxides, or NOx. During normal driving conditions, however, the vehicle emits more nitrogen oxides than allowed by law. By using this software, Volkswagen allegedly was able to claim that its diesel vehicles met tough air pollution standards while also delivering high fuel economy to its customers.

The EPA estimates that 2.0-liter diesel vehicles with this software emitted up to 40 times the legal amount of NOx pollution into the air, while 3.0-liter diesel vehicles emitted up to nine times the allowed levels.<sup>3</sup> Nitrogen oxides are a key component of soot and smog, exposure to which can trigger asthma attacks and cause premature death.

In parallel with this federal court action, the EPA and CARB have asked Volkswagen to develop a plan to retrofit the vehicles that have defeat devices so that they comply with all air quality standards. The agencies will require Volkswagen to recall and repair the defective vehicles, assuming the company can develop a remedial plan that the agencies approve.<sup>4</sup> The timing and scope of any such recall remains uncertain, as the company and agencies have not yet agreed on a plan that satisfies regulators' concerns about vehicle performance, safety, and emissions compliance.<sup>5</sup> A top CARB official said that it "may not be possible" to return the cars to their "certified configuration" and has publicly raised the possibility of allowing the vehicles to stay on the road.<sup>6</sup> On March 24, 2016, Volkswagen missed a court deadline to provide a plan to bring the cars into compliance. The company now has until April 21 to deliver a solution.

In addition to continuing to pursue a recall plan, the EPA and the DOJ will spend the coming weeks and months working to determine how to penalize Volkswagen for the company's alleged violations and, in some way, make up for the damage that the extra emissions from the defective vehicles imposed on human health and the environment.

If the EPA's allegations are true, then Volkswagen has been flagrantly violating the law for years, defrauding consumers, harming public health, and degrading the environment. Just as importantly, the company appears to have taken policymakers and the public down a false road by promising that diesel vehicles could meet the multiple objectives necessary for a modern vehicle fleet, including low tailpipe emissions and better fuel economy.

The Center for American Progress recommends that the EPA and the DOJ pursue a three-pronged approach to resolve these alleged violations:

- Require Volkswagen to mitigate or offset the NO<sub>x</sub> emissions attributable to its past or ongoing violations by replacing or retrofitting diesel engines in publicly operated vehicle fleets with cleaner technology. The EPA often includes mitigation actions as part of final settlements with companies regarding violations of the Clean Air Act, Clean Water Act, and other statutes.
- Assess large civil penalties for these violations in order to dissuade other car-makers from violating the law in the future. The Clean Air Act sets a maximum penalty of \$37,500 for each vehicle with the illegal software. Consequently, Volkswagen could face more than \$18 billion in monetary penalties.

- Work with Volkswagen to develop a significant Supplemental Environmental Project, or SEP, to clean up the U.S. transportation sector. Volkswagen would be motivated to work with the EPA to create a SEP, which could offset a portion of the civil penalties while achieving concrete pollution reductions. The SEP should direct a substantial amount of funds, perhaps calculated on a per-car basis, to create a fund for state and local governments, as well as private-sector entities, to implement projects to reduce pollution from on-road vehicles and increase deployment of zero-emission electric vehicles.

By taking this approach, the EPA could deliver NO<sub>x</sub> pollution reductions that exceed the excess emissions released by the defective Volkswagen vehicles while helping redirect and accelerate the nation's transition to a cleaner transportation sector. By ensuring that the penalties, mitigation action, and SEP total in the billions of dollars, this approach also would deter other automakers from violating the Clean Air Act in the future.

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