

Tier 3: A Promising Tool for Cleaning Our Air

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Utah is a great place to live. There are many reasons we choose to call Utah home: unparalleled beauty and access to outdoors; vibrant economic opportunities; an active, healthy lifestyle; and family-friendly communities. Our air quality affects each of these attributes and others. Improving the air quality in Utah is among our biggest challenges and opportunities.

Vehicles contribute approximately half of the air emissions generated along the Wasatch Front on a typical winter day. In fact, vehicles are the largest source of pollution during winter inversions and the summer ozone season. Therefore, our strategy to improve air quality must address vehicle emissions.

The Governor's Clean Air Action Team has analyzed over one hundred potential actions to improve air quality in Utah. Their top recommendation was to accelerate the transition to Tier 3 cars and fuel in Utah. Governor Herbert endorsed that recommendation during his 2014 State of the State address, and has been working diligently to that end ever since.



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Tier 3 refers to an integrated system of national vehicle and fuel standards established by EPA rule on April 28, 2014. Tier 3 replaces former Tier 2 standards and requires much cleaner vehicles to be phased in from model year 2017 through model year 2025. It will also reduce the sulfur content of gasoline from an average of 30 ppm to 10 ppm. Large refiners (those producing 75,000 bbl/day or more) must meet this new target by 2017. Small refiners, which include all those in Utah, have until 2020 to meet the standard. The low-sulfur fuel allows the advanced pollution control equipment in both new and existing vehicles to function much more effectively.

We can implement Tier 3 at modest cost. The EPA projects that Tier 3 cars will cost on average \$72 more than Tier 2 cars of the same model. They also estimate that the Tier 3 fuel standards will increase the cost of gasoline by less than a penny per gallon on a national basis. The actual cost to produce the cleaner fuels in Utah is not yet known.

The impacts of Tier 3 are significant. The EPA asserts that no state would benefit more from Tier 3 than Utah. The Utah Division of Air Quality (DAQ) estimates that Tier 3 fuel will immediately reduce vehicle emissions in our existing fleet by roughly 7% to 11%. Once fully implemented, the Tier 3 vehicle and fuel standards will reduce volatile organic compounds (VOC) and nitrogen oxides (NOx) emissions by 80% on a fleet average basis and direct particulate emissions by 70% on a per vehicle basis, according to EPA. This would be equivalent to taking four of every five cars off the road.

But the potential benefits of Tier 3 are not guaranteed to come to Utah. The EPA's fuel standard includes an "averaging, banking, and trading" system that allows refiners to meet the 10 ppm sulfur standard by averaging across their fleet of refineries or by purchasing credits from other refiners that have reduced sulfur below 10 ppm. Thus, a refiner could invest in low-sulfur technology in another state while making no changes in Utah, as long as it meets the 10 ppm average. Federal law prevents Utah from adopting its own fuel standard or requiring refiners to do anything more than is required by the EPA rule.

We face another challenge in transitioning to Tier 3. Manufacturing Tier 3 fuel will cause a modest increase in sulfur emissions from the refineries, although that increase is a small fraction of the emissions that would be reduced by using the cleaner fuels in our vehicle fleet. Utah's current State Implementation Plan (SIP) — the strategy developed by DAQ and approved by the EPA to meet federal air quality standards — imposes a cap on new industrial sources of pollution. The state has worked closely with the EPA to identify an approach to address this SIP issue and achieve the dramatic net benefits of producing low-sulfur fuel.

Without regulatory authority, the state is pursuing other avenues to bring the cleaner fuel to Utah. Governor Herbert held a series of one-on-one meetings this summer with the top executives of the refineries that sell the vast majority of gasoline into the Utah market. In those meetings, Governor Herbert outlined Utah's air-quality challenges,

reiterated his commitment to taking meaningful action to improve air quality and encouraged the executives to produce Tier 3 gasoline at the refineries that sell into Utah.

The refinery executives all responded positively and expressed interest in being part of the air-quality solution. All are actively pursuing engineering and economic studies with an eye toward producing Tier 3 gasoline in Utah. The state continues to explore other approaches to meet the governor's goal. The prospects for getting Tier 3 gasoline from most, if not all, of these refineries are good.

Consumers also have a role to play in accelerating the transition to Tier 3. Although manufacturers and auto dealers are not required to sell Tier 3 cars in Utah until 2017, the cleaner cars are already being manufactured and sold in other parts of the country. All new cars have a smog rating from one to 10 shown on the window sticker. A car with a smog rating of eight or higher generally meets Tier 3 emission standards. Anyone in the market for a new car can help improve our air quality by purchasing a vehicle with a smog rating of eight or above. The state has met with the Utah Automobile Dealers Association, which has agreed to work with its members to bring to Utah the cleanest version of the models they sell.

There is no silver bullet to achieving year-round clean air in Utah. We must employ a range of strategies, and each of us must do our part. Tier 3 vehicles and fuel will be a critical tool to achieve our goal of clean air today and into the future.



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Alan Matheson was appointed as the executive director of the Utah Department of Environmental Quality (DEQ) in 2015. He also served as the senior environmental advisor for Governor Gary Herbert from 2011-2015. As executive director of DEQ, he is responsible for providing leadership to the Department and the State of Utah to carry out DEQ's mission of safeguarding human health and quality of life by protecting and enhancing the environment.