Testimony for the Record

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For the Spotlight Forum

"Mind Over Methane: The No-Brainer Climate, Economic, and Health Solution"

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Ranking Member Whitehouse and distinguished Members of the Committee—thank you for the opportunity to testify today. My name is Courtney Smith, and I serve as the Principal Deputy Executive Officer of the California Air Resources Board, or CARB, where we advance science-based strategies to reduce emissions of harmful air pollutants to protect public health and the environment.

In 2016, then-Governor Jerry Brown, frustrated at the federal dismantling of climate science programs, somewhat famously declared that California would launch its "own damn satellite." Several years later, we have done just that, and I am honored to be here with you today to speak about the innovative ways California is leveraging remote-sensing technology to address potent methane pollution as part of our ambitious climate action.

From unprecedented wildfires to record-high temperatures to persistent drought conditions, the stark realities of climate change are already upon us in California. The state has long recognized the urgency of addressing the climate crisis and has set ambitious goals, including a commitment to achieve carbon neutrality by 2045 and a commitment to reduce methane emissions by 40% below 2013 levels by 2030. Reducing methane—a climate pollutant more than 80 times more potent than carbon dioxide over a 20-year timeframe—is critical to reaching that goal. Methane comes from various sources, including oil and gas operations, landfills, and agriculture. It also contributes to ground-level ozone, which is linked to respiratory illness and premature death.

Between 2016 to 2021, CARB and NASA's Jet Propulsion Laboratory conducted multiple methane aerial surveys across the state using airplanes configured with NASA-developed

imaging spectrometers. These flights demonstrated the capabilities and benefits of remote-sensing methane plumes and laid the groundwork for more robust and continuous satellite-based methane detection.

California has since dedicated $100 million in funding to support satellite detection and community engagement efforts. CARB selected Carbon Mapper and Planet Labs following a competitive procurement process.

We started receiving imagery of methane plumes across the state in May 2025. Upon receipt of the data, California notifies facility operators of these methane leaks, which can be emitting hundreds of kilograms of methane per hour. Within five days of being notified, oil and gas operators are required under California regulations to inspect their infrastructure and address leaking components, rather than during periodic leak inspections. The operators are required to promptly repair the leak, and thus by repairing faulty equipment, achieve substantial emission reductions that not only protect the climate but also minimize potential public health impacts, prevent the loss of valuable product, and help ensure safe infrastructure operations. Just a few weeks ago, on July 5, our satellite partner detected a methane plume over an oil and gas field. CARB identified the responsible operator and immediately notified them. Following the framework outlined in our regulations, the company repaired the leak just four days later. In this single instance, the rapid response initiated by satellite data is estimated to have prevented the release of methane equivalent to the annual greenhouse gas emissions of nearly 2,500 passenger cars, avoided over $100,000 in lost natural gas value, and delivered more than $250,000 in total societal benefits based on methane's climate impact. Similar successes have occurred at pipelines and landfills, where leaks may have gone undetected for months before launch of the satellite.

Methane remote sensing technology is also being explored as an option to satisfy new state requirements for oil and gas facilities located near communities to install leak detection systems.

Building on our experience in the oil and gas sector, CARB is exploring regulatory changes that would incorporate satellite-based methane detection approaches for landfills.

And lastly, collecting methane emissions data helps us assess and mitigate public health risks from co-emitted air toxins like benzene and particulates.

California's investment in methane detection technology, coupled with a rapid-response framework, provides a foundation for other jurisdictions to do the same. California is eager to share what we have learned and help others benefit from this cutting-edge technology.

To build on this progress, I respectfully recommend the following actions:

- **First, expand national investment in remote sensing technologies**, including satellites and ground-based networks, with an emphasis on transparency and interagency coordination.
- **Second, support state and tribal access to satellite data** through grants or subscription models, prioritizing regions with limited technical capacity.
- **And lastly, ensure that data drives timely action** by establishing clear federal guidance on how remote-sensing data could trigger investigations and enforcement actions, or could support voluntary action by operators.

Thank you again for the opportunity to testify. I welcome your questions.