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This Week in Review

(1) EPA Proposes Rule To Phase Down HFCs (May 3, 2021) - EPA has released a proposed rule that would phase down hydrofluorocarbons (HFCs) under the American Innovation and Manufacturing (AIM) Act of 2020. HFCs are greenhouse gases (GHGs) used as refrigerants, propellants, solvents, and in semiconductors and gas insulators. The AIM Act, which did not receive a vote as a stand-alone bill and was included in the Consolidated Appropriations Act of 2021, provides EPA new authorities to address HFCs and directs the agency to reduce production of these GHGs in the U.S. by 85% over the next 15 years, using an allowance allocation and trading program. EPA's proposal, which was signed April 30, 2021 by Administrator Michael Regan, would set the HFC production and consumption baseline levels from which reductions will be made, establish an initial methodology for allocating HFC allowances for 2022 and 2023, and create a compliance and enforcement system. The EPA intends to use the approach established through this rulemaking to issue allowances for 2022 by October 1, 2021 and plans to revisit the approach for subsequent years in a later rulemaking. It enables a process intended to yield a 10 percent reduction by 2024, 40 percent reduction by 2029, 70 percent reduction by 2034, and 85 percent reduction by 2036. EPA estimates that the total GHG emissions reduced by the proposed program from 2022 to 2050 be nearly equal to three years of U.S. power sector

GHG emissions at 2019 levels. A global HFC phasedown is modeled to avoid up to 0.5 °C of global warming by 2100. EPA estimates that the present value of the cumulative benefits of this action is \$283.9 billion from 2022 through 2050, and that the proposal will yield cumulative compliance savings for industry. The AIM Act's phasedown is consistent with the global phasedown of HFCs outlined in the Kigali Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer, an international agreement ratified by more than 115 countries. EPA will accept comments on this proposal for 45 days after publication in the Federal Register and hold a public hearing on June 2, 2021. For further information: <https://www.epa.gov/climate-hfcs-reduction/proposed-rule-phasedown-hydrofluorocarbons-establishing-allowance-allocation>

(2) EPA Inspector General Calls for New Risk and Technology Reviews for Sources of Ethylene Oxide and Chloroprene (May 6, 2021) – The EPA Inspector General (IG) has issued a report stating that EPA should conduct new Risk and Technology Reviews (RTRs) for categories of sources emitting ethylene oxide (EtO) and chloroprene to protect human health and achieve environmental justice. Specifically, the IG is calling on the agency to carry out new residual risk reviews for four major source categories that emit one of the pollutants; conduct a new residual risk review for the hospital sterilizer area source category; perform technology reviews for four source categories; establish new air toxics standards for chemical manufacturing area sources that emit EtO; and create a process for timely reviews of existing and uncontrolled sources when new risk information becomes available. According to the IG's report, elevated individual lifetime cancer risks from the source categories affect over 464,00 people in the U.S. EPA classified EtO as a carcinogen in 2016 and chloroprene as a likely human carcinogen in 2010 and updated their risk values accordingly. The IG recommends that EPA use those updated risk values in the new RTRs. For further information: <https://www.epa.gov/office-inspector-general/report-epa-should-conduct-new-residual-risk-and-technology-reviews>

(3) EPA Announces Updates to Toxics Release Inventory to Address Environmental Justice (April 30, 2021) – EPA announced that it would expand the scope of the Toxics Release Inventory (TRI) reporting requirements to add new chemicals and facilities and incorporate new tools to increase the public accessibility of the TRI data and advance environmental justice. Specifically, the expansion will include certain contract sterilization facilities that do not currently report on releases of ethylene oxide, many of which are located in areas with environmental justice concerns. In addition, EPA will add natural gas processing facilities to the list of sectors covered under the Emergency Planning and Community Right-to-Know Act, add new Per- and Polyfluoroalkyl Substances (PFAS) to the TRI list and propose adding chemicals included in the Toxic Substances Control Act (TSCA) workplan and other high-priority chemicals under TSCA. EPA will also take steps to make the TRI data more accessible by enhancing search tools to incorporate data from EJSCREEN, launch a Spanish version of the TRI information and promote pollution prevention information as a tool for communities to engage with facilities. For further information:

<https://www.epa.gov/newsreleases/epa-announces-plan-update-toxics-release-inventory-advance-environmental-justice>

(4) Harvard Researchers Publish Another “Big Data” Causality Study, Say Results Support Argument for Establishing “Warm-Season” Ozone Standard (May 6, 2021)

– Researchers at Harvard’s T.H. Chan School of Public Health published another study showing substantial mortality in an elderly cohort at levels below the National Ambient Air Quality Standards (NAAQS). The researchers, who have collaborated on other recent studies using “big data” – the national Medicare cohort during 2000-2016 – used the same cohort but a different approach to demonstrate causality: A decile binning approach (with the lowest decile bin serving as the baseline) with simultaneous emulation of causal dose-response (D-R) relations between chronic exposures to fine particulate matter (PM_{2.5}), ozone (O₃) and nitrogen dioxide (NO₂) and all-cause mortality. The researchers conclude that their study “provided more robust evidence of the causal relations between air pollution exposures and mortality” and that “[t]he emulated causal D-R relations provided significant implications for reviewing the [NAAQS], as they inferred the number of potential early deaths prevented if air pollutants were reduced to specific levels; for example, lowering each air pollutant concentration from the 70th to 60th percentiles would prevent 65,935 early deaths per year.” They further conclude, “[c]urrently the NAAQS lack regulation for long-term O₃, and clearly the daily standard has not reduced the warm-season average to concentrations with no mortality association. Our results support the argument for establishing a warm-season O₃ standard.” The study, “Emulating causal dose-response relations between air pollutants and mortality in the Medicare population,” is published in *Environmental Health*. For further information:

<https://ehjournal.biomedcentral.com/track/pdf/10.1186/s12940-021-00742-x.pdf>

(5) Researchers Discuss Shift Away from Coal to Fossil Gas and Biomass and Impacts on Public Health Burden (May 5, 2021)

– In an article published in *Environmental Research Letters*, researchers discuss the findings of their work to reconstruct the changes in the health effects of air pollution from U.S. stationary source fuel combustion from 2008 to 2017. Using three reduced complexity models (RCM) and emission inventory data, the four researchers, all at the Harvard T.H. Chan School of Public Health, found that the health impacts of air pollution from stationary sources in 2008 was driven largely by coal combustion, but by 2017, coal’s contribution had “dropped precipitously” and was replaced by a mix of source types and fuels consisting mainly of gas and biomass used by buildings and by industry and the remaining electricity generation that was powered by coal combustion. The also concluded that in 2017, nationwide, the health effects of biomass and wood combustion were higher than coal combustion and gas combustion individually. Further, in 2017, highest emissions and health effects were from industrial boilers, followed, in descending order, by residential buildings, electricity and commercial buildings. All three of the RCM models showed that biomass and wood were the greatest contributors of stationary source air pollution health effects in 24 states, and that total health effects of gas exceed those of coal in 19 states and the District of Columbia. Using a projection method

based on 2018 state-level energy consumption data the researchers concluded that these trends likely continued. For 2008 emissions, the three RCMs used had very similar results; at that time sulfur dioxide emissions from coal-fired power plants were predominant. There were, however, significant disparities among the three RCMs relative to the 2017 health burden, which the researchers believe is due to a higher proportionate share of less well-characterized pollutants. For further information: <https://iopscience.iop.org/article/10.1088/1748-9326/abe74c>

(6) Senator Carper Calls for Rigorous Vehicle Emission Standards to Accelerate Deployment of EVs (April 29, 2021) – Senator Tom Carper (D-DE), Chairman of the Senate Environment and Public Works Committee, sent a letter to EPA Administrator Michael S. Regan urging him to develop vehicle emission standards “that require rigorous annual decreases in all air pollutants based on increasing annual availability of zero emission vehicles in the U.S.” In his letter, Carper offers support for President Biden’s plan to reconsider the “deeply flawed” “SAFE” Vehicle Rules – the “SAFE” 1 Rule, directed at California’s waivers for the state’s greenhouse gas (GHG) emission standards and Zero-Emission Vehicle program, and the “SAFE” 2 Rule, directed at the actual standards – promulgated by the Trump Administration, noting that revisions to these rules can provide significant public health benefits, address environmental justice concerns and substantially reduce GHG emissions. Carper also emphasizes that strong U.S. policies will encourage investments in domestic research and development, manufacturing and, ultimately, export opportunities in automotive technology. With respect to vehicle standards, the strategy Carper encourages Regan to pursue is to “apply the California framework agreement to all auto makers through model year 2026. But EPA cannot rest there. EPA should also establish an emission standard for cars and trucks beginning with model year 2027 that reflects the increasing availability of zero emission vehicles. Consistent with the ambition we are seeing from automakers, EPA should set standards in a manner that will result in 50 percent of new vehicles being zero emission vehicles by 2030 and all new vehicles being zero emission vehicles by 2035.” The Senator offers a detailed description of the regulations he envisions in an attachment to his letter. For further information: https://www.epw.senate.gov/public/_cache/files/3/d/3dcc1965-f064-4467-8777-4243fe9c18f7/3BBB73D1DB1027E8105EF1AF45D32DCB.04-29-21-tc-to-epa-emissions-standards-letter-with-attachment.pdf

(7) EPA Proposes to Approve Petition from Maine to Remove Large Portion of the State from Ozone Transport Region (May 3, 2021) – EPA published in the *Federal Register* (86 Fed. Reg. 23,309) a proposed action to approve a February 24, 2020 petition from the state of Maine, submitted under Section 176(a)(2) of the Clean Air Act, requesting that a portion of the state be removed from the Ozone Transport Region (OTR). EPA states in the proposal, “For the reasons fully described in this notice, and in consideration of monitoring data, technical demonstrations, and impacts to air quality control regimes in the areas to be removed, the EPA believes that the portion of Maine requested for removal from the OTR does not contribute to a violation of any ozone standard in any area of the OTR, and that further control of emissions from that portion of Maine will not

significantly contribute to attainment of any ozone standard in any area of the OTR.” Maine’s request, and EPA’s proposal, would remove from the OTR all of the state with the exception of the so-called the “Portland and Midcoast Ozone Areas,” which consists of the 111 towns and cities of the Androscoggin Valley, Down East and Metropolitan Portland Air Quality Control Regions. The deadline for public comments on this action is June 17, 2021; EPA will hold a virtual public hearing if one is requested. For further information:

<https://www.govinfo.gov/content/pkg/FR-2021-05-03/pdf/2021-08825.pdf>

(8) Study: Most Coal More Expensive To Run Than To Replace With Renewables Today (May 5, 2021)

- A new economic study by Energy Innovation argues that only 20 percent of the remaining U/S. coal fired power plant will remain economic to operate past 2025, and that the remaining 80 percent have higher running costs today than would be incurred by building new wind and solar capacity. In 2019, 239 gigawatts (GW) of coal capacity was online in the U.S. and the report argues that in 2020, 166 GW of that capacity was either uneconomic compared to local wind or solar or slated for retirement within five years. Out of the 235 plants in the U.S. coal fleet, 182 plants, or 80 percent, are uneconomic or already retiring. The report includes a mapping tool indicating its findings on a plant-by-plant basis. Energy Innovation is a non-partisan California-based climate and energy think tank. For further information:

<https://energyinnovation.org/publication/the-coal-cost-crossover-2021/>

(9) Coal Company Petitions for Supreme Court Review of D.C. Circuit ACE Rule Decision (April 30, 2021)

– North American Coal Corp. filed a petition for a writ of certiorari asking the U.S. Supreme Court to review the January 2021 decision of the U.S. Court of Appeals for the District of Columbia Circuit to strike down EPA’s 2019 Affordable Clean Energy Rule, and to provide a definitive ruling on the scope of EPA’s authority to regulate greenhouse gas emissions from existing power plants under Section 111(d) of the Clean Air Act. The company argues that the CAA statutory text, contrary to the D.C. Circuit’s ruling, requires EPA to establish standards that are applicable to and achievable by individual sources, rather than implementing a broader, industry-wide approach. It further argues that it is “critically important” for the Supreme Court to take on this issue now, because until the D.C. Circuit’s ruling is affirmed or reversed, “every industry linked to global warming (*i.e.*, all of them) will be left in limbo.” If the lower decision is left to stand, the company asserts, the legislative branch “will be sidelined as proponents of radical action sit back and let the EPA impose their preferences by fiat, sparing them the political downside.” It goes on to write, “This issue has evaded review of six years, and if this Court declines to grant review now, it will evade review for the foreseeable future, while the decision below is used to justify even more radical next steps.” American Coal Corp.’s petition follows a similar one filed by nineteen states, led by West Virginia, on April 29 (see related article in the April 24-30, 2021 *Washington Update*). For further information:

http://www.4cleanair.org/sites/default/files/Documents/N_Am_Coal_Corp_ACE_Rule_Cert_Petition_4-30-21.pdf

(10) UN Calls for Steep, Urgent Methane Cuts (May 6, 2021) - A new report issued by the United Nations Environment Programme (UNEP) advocates a pathway for global anthropogenic methane emissions to be reduced by up to 180 million tonnes per year by 2030 – a 45 percent reduction. Methane is a GHG that contributes significantly to climate change, persisting in the atmosphere for roughly a decade after it is emitted. The UNEP assessment says the reductions called for would avoid nearly 0.3°C of global warming by the 2040s, which “would also, each year, prevent 255 000 premature deaths, 775 000 asthma-related hospital visits, 73 billion hours of lost labour from extreme heat, and 26 million tonnes of crop losses globally”. The assessment identifies available emission reduction approaches that would reduce methane emissions by 30 percent by 2030, mainly in the fossil fuel sector. UNEP’s assessment says that half of these approaches have “negative costs” for those implementing them. For further information: <https://www.unep.org/resources/report/global-methane-assessment-benefits-and-costs-mitigating-methane-emissions>

(11) State Department and EPA Accepting Applications for 2021 Virtual Air Quality Fellowship Program (May 3, 2021) – The U.S. Department of State and EPA are seeking candidates for the 2021 Virtual Air Quality Fellowship program. Since its establishment five years ago, this program has paired air quality experts in the United States with overseas U.S. diplomatic posts implementing air quality monitoring overseas. The State Department and EPA characterize the program as “a vital component of their collaborative efforts to improve access to, and application of, continuous air quality data worldwide.” State and local air agency staff are encouraged to apply for fellowships that will begin this Spring. Fellows will serve in a volunteer capacity for one year, providing technical and/or policy support to U.S. embassies and consulates on air quality monitoring and forecasting and related technical and policy activities. They will be expected to provide 10-20 hours each month of remote support to their host embassy or consulate; they will also be invited to attend monthly professional development webinars. Pending COVID-19 travel restrictions, there may be opportunities for sponsored overseas travel to visit the program. Applicants should have air quality monitoring expertise and an understanding of the health impacts of PM_{2.5}. They should also have an understanding of U.S. air pollution control and monitoring policy, have supervisor approval to apply for and join the program, work for a local, state, or federal government agency, a university or a non-profit institution, and be U.S. citizens. Applications will be accepted through May 21, 2021. For further information: <https://www.state.gov/application-period-open-for-department-of-state-and-environmental-protection-agency-virtual-air-quality-fellowship/> and <https://www.state.gov/global-air-quality-fellowship/>

The Week Ahead

- [Environmental Protection Agency Teleconference of the Children's Health Protection Advisory Committee on Science, Regulations and Other Issues Relating to Children's Environmental Health](#) – May 10, 2021

- [Resources for the Future Policy Leadership Series Webinar with United Airlines CEO Scott Kirby](#) – May 11, 2021
 - [The Environmental and Energy Study Institute Webinar on "Ambition and Opportunity in America's New Climate Commitments: U.S. Pledges to Reduce Emissions by 50 Percent by 2030"](#) – May 12, 2021
 - [House Agriculture Subcommittee on Conservation and Forestry Hearing on Title II Conservation Programs: Exploring Climate Smart Practices](#) – May 12, 2021
 - [House Foreign Affairs Committee Hearing on "Driving a Global, Whole-of-Society Response to Climate Action"](#) – May 12, 2021
 - [Resources for the Future and the Urban Institute Webinar on "Environmental Justice: Transitions and Equity"](#) – May 12, 2021
 - [Senate Committee on Environment and Public Works Hearing on Interior and EPA Nominees](#) – May 12, 2021
 - [The Center for American Progress Webinar on "Lessons Learned from California's Decades of Climate Action"](#) – May 13, 2021
 - [House Committee on Energy and Commerce Subcommittee on Environment and Climate Change Hearing on "The CLEAN Future Act: Superfund Proposals to Advance Cleanups, Equity, and Climate Resilience"](#) – May 13, 2021
 - [House Natural Resources Subcommittee on Indigenous Peoples of the United States Hearing on "Environmental Justice in Indigenous Communities"](#) – May 13, 2021
 - [Senate Committee on Energy and Natural Resources Hearing to Examine Offshore Energy Development](#) – May 13, 2021
 - [White House Environmental Justice Advisory Council \(WHEJAC\) Meeting](#) – May 13, 2021
 - [Rice University Baker Institute for Public Policy Webinar on Offshore Exploration and Production and the Global Energy Transition](#) – May 14, 2021
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