Introduction

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Welcome to the third volume of *Environmental and Energy Policy and the Economy* (*EEPE*). The six papers published here were first presented and discussed in May 2021 via an online conference hosted by the National Bureau of Economic Research (NBER), with participants from academia, government, and nongovernmental organizations. The papers contribute original research consistent with the broad aim of the *EEPE* initiative: to spur policy-relevant research and professional interactions in the areas of environmental and energy economics and policy. Although conference participants missed out on the opportunity for in-person interaction for the second year in a row, we made up for it again with a larger-than-expected number of participants. The agenda also included a featured presentation by Heather Boushey, a member of the White House Council of Economic Advisors.

In the first paper, Rebecca Davis, Scott Holladay, and Charles Sims provide insight on recent trends and forecasts about coal-fired power plant retirements in the United States, with and without future climate policy. In particular, they summarize retirements over the past decade and develop a real options approach to predict when currently operating plants will retire. Their model projects a wave of coal plant retirements through the mid-2020s, but then a persistent tail of plants that will remain in operation for 2 decades, even if a carbon tax is in place.

Severin Borenstein and James Bushnell examine the extent to which inefficient pricing—that is, when market prices do not reflect the full social costs—of electricity, natural gas, and gasoline exists in the United States. Providing geographically refined estimates, they find that existing price

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distortions are much greater for electricity than for natural gas or gasoline. They then consider the implications in California of eliminating these price distortions, concluding that a move to efficient pricing would significantly increase Californians' incentives to switch to electricity for fundamental energy services, such as space heating, water heating, and transportation.

More generally, given decarbonization goals in the transportation sector, what future pathways of electric vehicle (EV) adoption might we expect in the United States? That is the question taken up in the paper by James Archsmith, Erich Muehlegger, and David Rapson. They consider how future EV growth is likely to depend on intrinsic demand, cost declines, and government subsidies. Many of the scenarios they consider are directly relevant to ongoing policy proposals, and a key insight of their analysis is that preferences for light trucks—for which there have been no EV alternatives on the market—will play a crucial role in the transition from internal combustion engines to EVs.

Also focused on EVs, Ken Gillingham's paper analyzes the question of how increased EV adoption might affect the way regulators design vehicle fuel economy standards. He shows that current practices intended to incentivize EV supply and demand have the unintended effect of weakening fuel economy standards and, under some conditions, even reduce the market share of EVs. Beyond identifying this perverse effect, the paper outlines some policy alternatives that could help address the tradeoff, with consequences that depend on the amount of future innovation in the EV market.

Frank Wolak contributes a paper focused on long-term resource adequacy in wholesale electricity markets with significant intermittent renewables. The importance of the topic was highlighted recently with significant and consequential supply shortfalls in both California and Texas. The paper provides a "postmortem" analysis of both events, drawing conclusions about the underlying causes. The paper also develops an alternative approach for determining long-term resource adequacy with properties intended to avoid such crises in the future.

In the last paper, Barbara Annicchiarico, Stefano Carattini, Carolyn Fischer, and Garth Heutel summarize the literature that considers the relationship between business cycles and environmental policy. They translate key insights from the literature related to real business cycle models, New Keynesian extensions, open-economy variations, and topics related to monetary policy and fiscal regulation. In addition to summarizing the policy-relevant conclusions of these literatures, the authors discuss areas where future research is needed.

Finally, we make some important acknowledgments. We are grateful to all of the authors for their time and effort in helping to make the third year of *EEPE* a success. We are grateful to Jim Poterba, president and CEO of the NBER, for continuing to support the initiative, and to the NBER's conference staff, especially Rob Shannon, for making the organizing a pleasure. Helena Fitz-Patrick's help with the publication is also invaluable and greatly appreciated. We also thank Catherine Wolfram for her direct involvement in the first two volumes as a coeditor and hope the experience is now contributing to her success as deputy assistant secretary for Climate and Energy Economics at the US Department of the Treasury. Last, and most important, we would like to thank Evan Michelson and the Alfred P. Sloan Foundation for the financial support that has made the *EEPE* initiative possible.

Endnote

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