U.S.A. Greenhouse Gas Mitigation Prospects

John Reilly
Global Change Forum XLIV: Global Net Zero
Emissions Goals
Cambridge, MA, 23-24 Mar. 2022



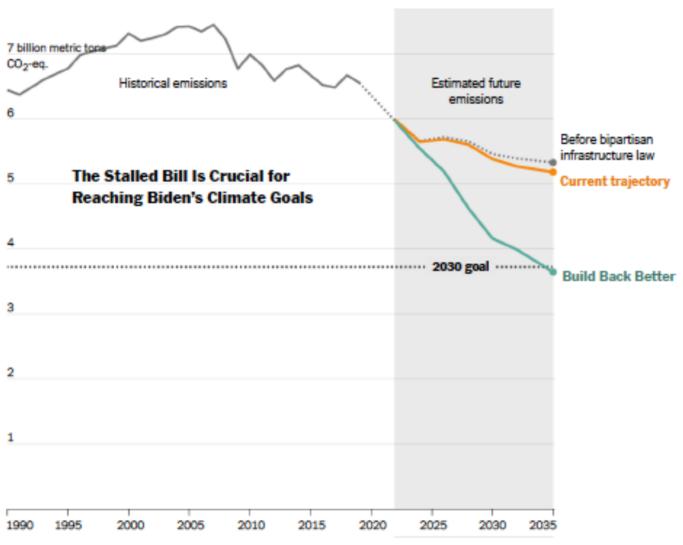
Contact: jreilly@mit.edu

Major Legislation—Passed and Proposed

- Infrastructure Investment and Jobs Act (IIJA, H.R. 3684) signed into law in Nov. 2021
 - Focused more on infrastructure for climate resilience.
 - Some funds for EV chargers, efficiency/weatherization. Clean energy demonstration, keep open nuclear plants, hydrogen/CCUS R&D hubs funding, some methane reduction from oil, gas, and coal, wildfire prevention.
- Build Back Better Act (BBBA, H.R. 5376), passed House on Nov. 19 but stalled in the Senate
 - Much more focused on reducing GHG emissions
 - \$555 Billion total, especially on electricity and transportation but also programs for agriculture, efficiency,

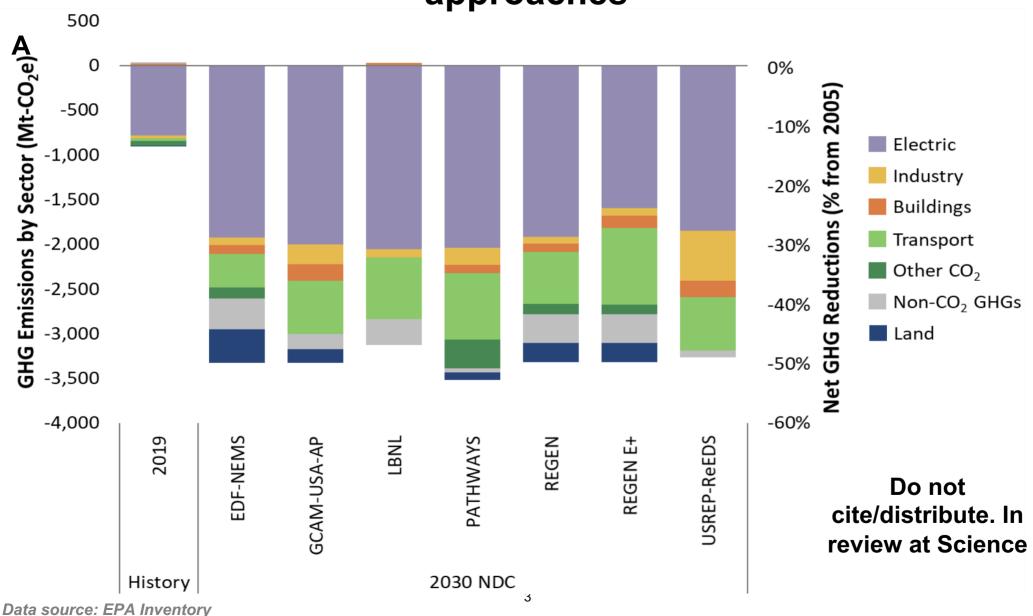
What the Stalled Build Back Better Bill Means for Climate, in One Chart

(From Brad Plumer, Nadia Popovich, NYT Dec. 21, 2021, based on Princeton's Repeat Project)



Source: <u>REPEAT Project</u> • Notes: The analysis is based on a version of the Build Back Better bill that passed the House in November. The modeled trajectories do not capture potential changes in vehicle travel as a result of new highway and transit spending in the infrastructure bill, and they do not include the effects of the new E.P.A. light duty vehicle emissions rules released this week. The data excludes changes in land carbon sinks.

Sectoral Emissions Reductions to Reach ~50% reduction by 2030, 7 studies with various approaches



For more details on the modeling studies cited here.

EDF-NEMS: "Recapturing U.S. Leadership on Climate: Setting an Ambitious and Credible Nationally Determined Contribution," Environmental Defense Fund (2021).

GCAM-USA-AP: N. Hultman et al., "An All-In Climate Strategy Can Cut U.S. Emissions by 50% by 2030" (America Is All In, 2021).

LBNL: N. Abhyankar *et al.*, "Illustrative Strategies for the United States to Achieve 50% Emissions Reduction by 2030" (Lawrence Berkeley National Laboratory, 2021).

PATHWAYS: R. Fakhry, S. Yeh, "The Biden Administration Must Swiftly Commit to Cutting Climate Pollution at Least 50% by 2030" (IB: 21-03-A, National Resources Defense Council, 2021).

REGEN: J. Bistline *et al.*, "Strategies and Actions for Achieving a 50% Reduction in U.S. Greenhouse Gas Emissions by 2030" (3002023165, Electric Power Research Institute, 2021).

USREP-ReEDS: M. Yuan *et al.*, "Meeting Potential New U.S. Climate Goals" (Report 351, MIT Joint Program on the Science and Policy of Global Change, 2021).