Climate Bill Cuts Electricity Bills

H.R. 2454 saves Americans an average of \$6 per month

Americans in nearly every state will save on their monthly electricity bill under the American Clean Energy and Security Act. With its energy-efficiency and consumer protection provisions, H.R. 2454 creates modest savings for most consumers. Even in the few states where savings compared to business-as-usual are not projected, bills still will be lower under H.R. 2454 than they were in 2007.



Methodology and Sources

The data presented are based on analysis that NRDC commissioned from OnLocation Inc., using NEMS-NRDC. NEMS was developed by the U.S. Department of Energy, and is the model that the Energy Information Administration (EIA) uses to develop its Annual Energy Outlook. OnLocation has extensive experience with the NEMS model, and has provided NEMS model development and support to EIA for over 20 years. For this project OnLocation analyzed H.R. 2454 using a modified version of the model, which is referred to as NEMS-NRDC. NEMS-NRDC portrays the effects of H.R. 2454, including carbon price projections, energy efficiency improvements (represented by adopting EIA's High Technology case assumptions), allocations to local distribution companies (LDCs), and dynamic responses (e.g., demand reductions and fuel switching to lower carbon fuels). The bill's refunds to low-income consumers are not included in the results presented here. The NEMS model generates results resolved to the regional, not the state level. NRDC further focused the results to the state level by assuming each state's electricity prices and consumption would change by the same percentage as those of the region in which the state is located, and its population would change by the same percentage as the overall U.S. population. As variation may occur between state and regional and state and national trends, these results should be considered approximate.

Details:

- Electricity bill savings (or costs) are the difference in residential electricity expenditures (price multiplied by consumption) between the Business-as-usual (BAU) and H.R. 2454 cases, per household. Changes in expenditures on energy-using devices are not included.
- Business-as-usual state-specific electricity prices and consumption levels are projected to 2020 by scaling state-specific 2007 data in proportion to changes in the electricity prices and consumption levels of the region in which the state is located. [Sources: 2007 state data from EIA. Projected electricity prices and consumption levels of each region from NRDC-NEMS Reference case based on AEO2009.]
- The percentage changes in electricity prices and consumption levels per state under H.R. 2454 are assumed to be the same as the percentage changes in electricity prices and consumption levels of the region in which the state is located. [Sources: Projected changes in electricity prices and consumption levels of each region from NEMS-NRDC modeling of H.R. 2454.]
- State-specific number of households is projected to 2020 using 2000 state-specific data scaled in proportion to the projected change in the national total [Sources: 2000 data from U.S. Census. Projected growth in number of households in total U.S. from EIA.]
- Regions are based on the NERC regions and sub-regions that EIA uses in AEO 2009. If a state falls into more than one region then its projections are calculated through taking a population-based weighted average of the two or more regions into which it falls.
- Four states experience modest bill increases relative to the business-as-usual case despite electricity prices that are projected to be below 2007 levels under H.R.2454. In the region that all four states are in, electricity prices are projected to drop by 14.6% between 2007 and 2020 under BAU and by 2.6% under H.R. 2454.

Sources used are: NEMS-NRDC modeling of H.R. 2454 (built upon AEO 2009). Department of Energy's Energy Information Administration. U.S. Census Bureau.

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