

US EPA ARCHIVE DOCUMENT

TRANSLATION OF THE STATE-SPECIFIC RATE-BASED CO₂ GOALS TO MASS-BASED EQUIVALENTS

- Since proposing the Clean Power Plan in June, EPA has engaged in unprecedented outreach to a broad range of stakeholders. Many stakeholders, and states, in particular, have requested additional information about what a translation from a rate-based goal to a mass-based equivalent would look like.
- As part of our efforts to respond to requests and provide information to all stakeholders, EPA is issuing a technical document that provides two examples of how a state, area of Indian country or territory could translate its rate-based goal to total metric tons of carbon dioxide (a mass-based equivalent).
- The example translations in today's technical support document (TSD) are not based on any new information, nor do they change the rate-based state goals outlined in the June proposal or the rate-based goals for areas of Indian country and territories outlined in the October supplemental proposal. The example mass-based equivalents are not required emissions limits nor should they be interpreted as a cap on emissions.
- These are only two of many ways to translate from a rate-based goal to a mass-based equivalent. There are other ways to make the rate-to-mass translation and EPA wants to hear from stakeholders and the public on this important topic.
- In the Clean Power Plan, EPA proposed jurisdiction-specific, rate-based goals that represent the emissions of carbon dioxide (CO₂) per unit of electric generation – a pollution-to-power ratio for the future carbon intensity of covered existing fossil fuel-fired power plants for states, areas of Indian country and U.S. territories with affected power plants.
- A mass-based equivalent represents the total metric tons of CO₂ emitted by affected sources and that is equivalent to the proposed rate-based goals for each state, area of Indian country or territory. The TSD illustrates possible methods that these areas could use to calculate a mass-based equivalent by factoring in historical and/or projected electricity generation.
- States, areas of Indian country and territories have the flexibility to choose whether to meet a rate-based goal or a mass-based equivalent, as proposed in the rule. If states, areas of Indian country and territories decide to use a mass-based number they would need to demonstrate that it is equivalent to their rate-based goal.
- A list of mass equivalents for affected states, areas of Indian country and U.S. territories are available online at <http://go.usa.gov/G6re>.

Translating a Rate-Based Goal to a Mass-Based Equivalent

- The basic formula for translating from a rate-based (carbon intensity) goal to a mass-based (CO₂ metric tonnage) equivalent is:

$$\text{Mass} = \text{CO}_2 \text{ Emissions Rate} \times \text{Generation}$$

- As the starting point for the example calculations presented in the TSD issued today, EPA used the state-specific, emission rate-based CO₂ goals in the June proposal and the rate-based goals for Indian country and U.S. territories outlined in the October supplemental proposal.
- This means that the only variable in the equation is generation. There are many ways to calculate generation, and the Clean Power Plan provides states, areas of Indian country and territories with the flexibility to identify an approach that best fits their situation.
- In June, the EPA provided the basic information necessary to translate the emission rate-based CO₂ goals into mass-based equivalents. The EPA also included a TSD titled “Projecting EGU CO₂ Emission Performance in State Plans,” that discusses the considerations, data and technical approaches that could be considered when doing this translation and focuses on one potential approach that states, areas of Indian country and territories could use.
- EPA’s technical support document issued on November 6, 2014 walks through two additional example approaches that present two different ways to calculate generation.
- The first approach calculates generation from existing affected fossil fuel-fired sources using historical data.
 - Historical 2012 generation data was adjusted to account for the increased use of renewable energy and nuclear power, as well as the implementation of energy efficiency policies.
 - This is the same data the agency used to calculate the rate-based goals included in the June proposal and the October supplemental proposal.
- The second approach calculates generation from existing affected and new fossil fuel-fired sources using a combination of historical and projected data.
 - Historical 2012 generation data was adjusted to account for the increased use of renewable energy and nuclear power, as well as the implementation of energy efficiency policies.
 - Because this approach includes existing AND new sources, projected generation from new sources is included in the calculation using data from the Energy Information Administration’s (EIA’s) 2013 Annual Energy Outlook (AEO2013) that was used in certain parts of the proposed rule.
 - This approach reflects the flexibility in the proposal that gives states, areas of Indian country and territories the option to potentially include new, fossil fuel-fired power

plants as part of their plans.

- EPA is continuing to seek ideas and comments about the relationship between rate-based goals and mass-based equivalents as we work toward a final rule that is flexible and empowers states, areas of Indian country and territories to chart their own, customized path to meet goals for reducing harmful carbon pollution. The information is in the docket for public review and comment and can also be found on the web at www.epa.gov/cleanpowerplan.

How to Comment

- This TSD provides additional information pertinent to the proposed Clean Power Plan published on June 18, 2014. Comments on that proposal, including this TSD are due no later than December 1, 2014.
- Comments on the TSD should be identified by Docket ID No. EPA-HQ-OAR-2013-0602. All comments may be submitted by one of the following methods:
 - **Federal eRulemaking Portal:** <http://www.regulations.gov>. Follow the online instructions for submitting comments.
 - **Email:** A-and-R-Docket@epa.gov. Include docket ID No. EPA-HQ-OAR-2013-0602 in the subject line of the message.
 - **Fax:** (202) 566-9744.
 - **Mail:** Environmental Protection Agency, EPA Docket Center (EPA/DC), Mailcode 28221T, Attention Docket ID No. OAR-2013-0602, 1200 Pennsylvania Avenue, NW, Washington, DC 20460.
 - **Hand/Courier Delivery:** EPA Docket Center, Room 3334, EPA WJC West Building, 1301 Constitution Avenue, NW, Washington, DC 20004. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.