

## U.S. Department of Energy Emissions Value Request Application Submission Instructions

The Emissions Value Request Application (Application) will be used to collect information from hydrogen producers seeking to obtain an emissions value from the Department of Energy (DOE) before filing a petition for a provisional emissions rate (PER) with the Internal Revenue Service (IRS) for the purpose of claiming the tax credit for producing clean hydrogen (Internal Revenue Code section 45V). These instructions describe the information a hydrogen producer (applicant) must provide to the DOE to obtain an emissions value from the DOE.

Currently, to request an emissions value from the DOE for a given hydrogen production facility with a hydrogen production pathway not already included in the 45VH2-GREET model, applicants must first complete a front-end engineering and design (FEED) study of the facility based on an Association for the Advancement of Cost Engineering (AACE) Class 3 Cost Estimate.<sup>1</sup> Applicants must then submit to the DOE the following documents:

1. Specific sections of the FEED study, as described below; and
2. A completed Emissions Value Request Form (Form), as described below.

In addition to the required documents, applicants also have the option to include additional information that may be beneficial in completing lifecycle greenhouse gas emissions analysis of the hydrogen production pathway described in the Form and FEED study.

The following sections of the FEED study must be submitted in Microsoft Word or Adobe PDF file format:

1. Block flow diagrams of all major processes within the hydrogen production facility
2. Piping & instrumentation diagrams (P&IDs)
3. Energy & material mass flows and balances
4. Process equipment list
5. Water mass flows and balances
6. Chemical composition and balances of process inputs and outputs
7. Steady state greenhouse gas (GHG) emissions data (CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O)
8. Waste stream management summary
9. Physical and chemical properties of process input and output flows as applicable (e.g., purity, pressure, density, enthalpy, lower heating value, carbon content in mass%, etc.)

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<sup>1</sup> The section 45V notice of proposed rulemaking (NPRM) provided that applicants may only request an emissions value after having completed a FEED study or similar indication of project maturity, as determined by the DOE, such as project specification and cost estimation sufficient to inform a final investment decision. The DOE has determined that a FEED study completed to an AACE Class 3 cost estimate is necessary to sufficiently indicate commercial project maturity for robust emissions analysis at this time. The notice of proposed rulemaking requested comments on appropriate indicators of project maturity. On April 11, 2024, the Treasury Department issued a supplemental notice of proposed rulemaking (SNPRM) to invite comment on the information collection proposed for the DOE's Emissions Value Request Application Process. The Treasury Department and the IRS received comments on appropriate indicators of project maturity in response to the NPRM and SNPRM. If the DOE later determines that other indicators of project maturity (other than a Class 3 FEED study) are viable, the DOE may revise its requirements accordingly.

Applicants must also use information from the FEED study to complete the Form, which is available at <https://www.energy.gov/eere/emissions-value-request-process>. This form contains detailed instructions and example values for the information being requested. The form requests applicants provide:

1. Their contact information;
2. A process block diagram of the hydrogen production pathway for the qualified clean hydrogen production facility (referred to as the “facility”);
3. Input and output flows expected for the facility;
4. Total annual expected consumption of each feedstock used by the facility;
5. Source and quantity of electricity expected to be used by the facility and verified by qualifying energy attribute certificates (EACs) consistent with any guidance issued by the Internal Revenue Service (IRS) or the Treasury Department with respect to section 45V;
6. Source and quantity of electricity expected to be used by the facility without qualifying EACs; and
7. Total quantity of hydrogen and valorized co-products expected to be generated by the facility.

The applicant may submit any additional documents in support of completing an emissions analysis of the facility’s hydrogen production pathway. This additional documentation is optional, and the Application will be deemed complete regardless of whether this additional documentation is provided.

To submit this material to the DOE, applicants must first send an email to [45VEmissionsRequest@ee.doe.gov](mailto:45VEmissionsRequest@ee.doe.gov) stating their intent to submit an Application to DOE as well as the name of their organization with the subject line “Intent to Submit Emissions Value Request Application”. The DOE will then send the applicant an email with a link to a secure folder, where the applicant must upload the Application. If the DOE has any follow-up questions regarding the material submitted, the DOE will contact the email address provided in the Form. Additionally, the DOE may request a site visit, where possible, or similar activities necessary to understand the hydrogen production facility or the facility’s pathway described in the Application. Applicants are required to respond to follow-up questions or requests for site visits within 30 days of receipt of the request. Failure to respond in a timely manner may result in the DOE denying review of the Application.

After receipt of the Application, the DOE’s employees and contractors, including personnel at Argonne National Laboratory (ANL), will review the Application for responsiveness and completeness. The DOE will decline to review Applications that are incomplete (such as those that are missing the required sections of the FEED study, or those wherein mass or energy balances for input flows are inconsistent with reported output flows) or nonresponsive. Nonresponsive applications include those for which DOE review and/or issuance of an emissions value could be unnecessary or misleading given significant outstanding questions regarding how life cycle analysis considerations of the pathway will be addressed in final 45V regulations,

and/or inconsistency of the pathway with proposed regulations. Once the Treasury Department issues final 45V rules, DOE may begin to review such applications.

Applicants should not include trade secrets or business-sensitive, proprietary, or otherwise confidential information in their Application unless such information is necessary to meet the requirements listed above. If an Application includes trade secrets or business-sensitive, proprietary, or otherwise confidential information, it is furnished to the Federal government in confidence with the understanding that the information shall be used or disclosed by the DOE only for evaluation of the Application. Additionally, the information provided to the DOE for the emissions value analysis may inform updates to the 45VH2-GREET model. Information disclosed in these updates will be restricted to that which has been gained through other sources or anonymized information gathered through review of Applications. These updates will not include any business-sensitive, proprietary, or otherwise confidential information that can be traced to a particular technology or company.

Such confidential business information that is properly marked and identified will be withheld from public disclosure to the extent permitted by law, including the Freedom of Information Act. Without assuming any liability for inadvertent disclosure, the DOE will seek to limit disclosure of such information to its employees and to outside reviewers when necessary for review of the Application or as otherwise authorized by law. This restriction does not limit the Federal government's right to use the information if it is obtained from another source. Information submitted to the DOE will be handled according to 10 CFR 1004.11.

If an Applicant chooses to submit trade secrets or business-sensitive, proprietary, or otherwise confidential information, the Applicant must provide two copies of the submission (e.g., FEED Study Content, Emissions Value Request Form). The first copy should be marked "non-confidential," with the information believed to be confidential deleted. The second copy should be marked "confidential".

The DOE intends to periodically publish updated versions of the 45VH2-GREET model, and new versions may contain additional hydrogen production pathways. Consistent with any guidance issued by the IRS or the Treasury Department with respect to section 45V, the DOE will decline to review Applications for emissions values that are pending at the time the hydrogen production pathway described in the Application is included in an updated version of the 45VH2-GREET model.

Responsive and complete applications received by the DOE will be reviewed as quickly as possible. Variables that may affect the timeline for application review include: 1) volume of applications received around a given hydrogen production pathway, 2) complexity/ease of evaluating the hydrogen production pathway, and 3) commercial readiness of the pathway. The DOE will inform applicants whether or not their application is deemed responsive and complete prior to beginning application review. Upon completion of review, the DOE will send applicants written documentation describing emissions values for their pathways and provide an emissions value that may be used in petitioning the IRS for a provisional emissions rate (PER) (as stated in

Prop. Treas. Reg. § 1.45V-4(c)(3) in the NPRM for the section 45V credit). If the 45VH2-GREET model is updated to include an applicant's pathway before DOE review is completed, DOE will inform the applicant that the model has been updated and that the application review therefore will not be completed.