



Department of Energy

Privacy Impact Assessment (PIA)

Guidance is provided in the template. See DOE Order 206.1, Department of Energy Privacy Program, Appendix A, Privacy Impact Assessments, for requirements and additional guidance for conducting a PIA: https://www.directives.doe.gov/directives-documents/200-series/0206.1-BOrder/@@images/file

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MODULE I – PRIVACY NEEDS ASSESSMENT	
Date	5/1/2023
Departmental Element & Site	Advanced Research Projects Agency – Energy (ARPA-E)
Name of Information System or IT Project	48C eXCHANGE Module for the Internal Revenue Service (IRS) Qualifying Advanced Energy Project Credit Allocation Program Under Section 48C(e) of the Inflation Reduction Act of 2022 (IRA).
Exhibit Project UID	N/A
New PIA Update	This PIA is an attachment to the ARPA-E Funding Opportunity Announcements (FOA) PIA signed on April 28, 2022. The purpose of this attachment is to document the use of a "cloned" version of the eXCHANGE system as the database for administering the 48C DOE/IRS tax credit program, which DOE will administer on behalf it the IRS. There are no changes to other systems mentioned in the FOA PIA.





MODULE I – PRIVACY NEEDS ASSESSMENT

	Name, Title	Contact Information Phone, Email
System Owner	Shane Kosinski Deputy Director for Operations ARPA-E	202-287-1010 shane.kosinski@hq.doe.gov
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Person Completing this Document	David Dixon ARPA-E Support Contractor, Project Manager	202-287-1068 David.dixon1@hq.doe.gov
Purpose of Information System or IT Project	The Inflation Reduction Act of 2022 (the IRA or the Act) establishes five tax credit programs that DOE will administer on behalf of the IRS. Each will have its own Memorandum of Understanding establishing, among other things, data to be collected, how data may be accessed and used, security and privacy provisions, and records management requirements. Each arrangement will be subject to a separate Privacy Impact Assessment (PIA), as well. This PIA focuses on the first tax credit program, undertaken under Section 48C of the Act, which is targeted at manufacturing companies that are part of a qualifying advanced energy projects to expand U.S. manufacturing capacity and quality jobs for clean energy technologies (including production and recycling), to reduce greenhouse gas emissions in the U.S. industrial sector, and to secure domestic supply chains for critical materials (including specified critical minerals) that serve as inputs for clean energy technology production. Under the MOU to establish this program, DOE has agreed to establish and maintain a public-facing applicant portal and system into which applicants can submit proposals that DOE will review and evaluate on behalf of the IRS, against established criteria.	





MODULE I – PRIVACY NEEDS ASSESSMENT

In 2013, DOE worked with the IRS using the eXCHANGE portal for a similar tax program which collected taxpayer information. DOE will use an "cloned" instance of an existing system initially developed by ARPA-E called eXCHANGE, which DOE and IRS utilized in 2013 to manage a similar program. The use of a cloned instance will ensure than information for this new program is completely segregated from any other information that may reside in different instances of eXCHANGE.

The eXCHANGE portal will be used in conjunction with the Login.gov identity authentication capability to identify and authenticate applicants and manage user profiles and provide a platform for the collection and assessment of submitted tax credit applications and concept papers describing proposed projects.

Applicants will be asked to provide taxpayer identification numbers (TINs), which will be used to verify applicants against the IRS's master taxpayer files. Applicants must also submit a concept paper for DOE consideration, a § 48C(e) application and a concept paper to request a credit allocation. Merit Reviewers review concept papers and FOAs based off its merits. These reviewers are federal employees and contractors that possess the expertise in reviewing these types of documents and will evaluate suitability of applications under the criteria set forth by the IRS and DOE.

DOE will employ a cadre of Merit Reviewers to evaluate and assess applications. These Merit Reviewers will be federal employees, contractors and members of the private sector who possess expertise in this program and will evaluate suitability of applications under criteria developed by the IRS and DOE. Merit Reviewers will be asked to register their credentials via the eXCHANGE system and will be provided with role-based access to applications and concept papers to assess proposals against established criteria. DOE reviewers will provide recommendations on applications that are eligible for the tax credit. Once the IRS validates the DOE recommendation, DOE will issue a determination letter to applicants, on behalf of the IRS, verifying the applicability of the proposed project for the tax credit.

All the information collected by DOE on the IRS's behalf under this program, including any PII, is considered Federal Taxpayer Information (FTI). This information is highly sensitive, and the IRS has promulgated specific requirements for its security and confidentiality, found in IRS Code Section 6103. The IRS has changed its security requirements to reflect the risk and sensitivity associated with the collection, use, and management of taxpayer information in compliance with Internal Revenue Code Section 6103. These protections are incorporated into the MOA.

In order to meet the IRC 6103security and confidentiality requirements for safeguarding federal tax information (FTI), DOE elected to create a cloned version of eXCHANGE specifically for this project. This newly developed cloned version of eXCHANGE will be used for the collection of information from taxpayers (manufacturers and corporations) in relation to tax credit projects. The cloned version of eXCHANGE will ensure that appropriate technical safeguards are implemented by





MODULE I – PRIVACY NEEDS ASSESSMENT DOE as the service provider to the IRS for this tax credit program. This decision was made by DOE to ensure that the original eXCHANGE system is not compromised in any way. In addition to technical controls, data protections and markings requirements are outlined in the memorandum of agreement between the IRS and DOE for the 48C program. It is likely that DOE will continue to evaluate the efficacy of eXCHANGE, and if a new system is selected, DOE will transfer data to the new system, decommission the cloned version, and undertake new PIA to evaluate additional privacy considerations for the new system. Websites for ARPA-E eXCHANGE: https://arpa-e-foa.energy.gov/. Applicant Material for eXCHANGE portal: https://infrastructure-exchange.energy.gov SSN - taxpayer identification number (TIN), including EINs and SSNs. The IRS requires this number to link individual applicants and entities to link to their existing IRS taxpayer profiles in the IRSs systems. Medical & Health Information e.g. blood test results Financial Information - federal tax information, including applications and concept papers **Type of Information** Clearance Information e.g. "Q" Collected or **Maintained by the** Biometric Information e.g. finger print, retinal scan System: DoB, Place of Birth Employment Information – Resumes and CV's of merit reviewers. This system will also collect company information from individuals submitting on behalf of a company. Criminal History





MODULE I – PRIVACY NEEDS ASSESSMENT Name, Phone, Address – longitude and latitude of energy facility seeking tax credit. On behalf of the IRS, DOE will issue determination letters to applicants verifying the applicability of the proposed project for the tax credit. Other – Applicants will need to create an account (username will be their email address). Names of companies applying for tax credit consideration; concept papers that may contain PII. Applicants may be asked to provide their assigned Unique Entity Identifier (UEI) Number, which replaces the previous DUNs for tracking entities and organizations A Unique Entity Identifier (UEI) is a number issued by the System for Award Management (SAM) to identify businesses and other entities that do business with the federal government. A control number will be assigned to each application within the eXCHANGE system. This control number will not be linked to a specific applicant but will serve as a connector for documents associated with the application. Applicants will then be redirected to login.gov to provide their login.gov sign in information to authenticate them to the user's registered eXCHANGE account. Has there been any attempt to verify PII does not exist on the This is not applicable as PII is system? contained within the system. DOE Order 206.1, Department of Energy Privacy Program, defines PII as any information collected or maintained by the Department about an individual. including but not limited to, education, financial transactions, medical history and criminal or employment history, and information that can be used to distinguish or trace an individual's identity, such as his/her name, Social Security number, date and place of birth, mother's maiden name, biometric data, and including any other personal information that is linked or linkable to a specific individual. N/A If "Yes," what method was used to verify the system did not contain PII? (e.g. system scan) Threshold Questions 1. Does system contain (collect and/or maintain), or plan to YES contain any information about individuals? 2. Is the information in identifiable form? YES

YES

☐ Federal Employees

Contractor Employees



3. Is the information about individual Members of the Public?

4. Is the information about DOE or contractor employees?



MODULE I – PRIVACY NEEDS ASSESSMENT

If the answer to <u>all</u> four (4) Threshold Questions is "**No**," you may **proceed to the signature page** of the PIA. Submit the completed PNA with signature page to the CPO.

Module II must be completed for all systems if the answer to any of the four (4) threshold questions is "Yes." All questions must be completed. If appropriate, an answer of N/A may be entered.

The goal of the threshold questions is to legitimately and efficiently determine whether additional assessment is necessary. If there is doubt, it is in the System Owner's best interest to complete Module II.

PIAs affecting Members of the Public are posted on the DOE Privacy website. For this reason, PIAs affecting Members of the Public should be written in plain language and at a high level so they are easily understandable and do not disclose sensitive information.

END OF PRIVACY NEEDS ASSESSMENT

MODULE II – PII SYSTEMS & PROJECTS

AUTHORITY, IMPACT & NOTICE

1. AUTHORITY

What specific authorities authorize this system or project, and the associated collection, use, and/or retention of personal information?

Section 48C(e) of the Inflation Reduction Act of 2022 (Public Law 117-169); 42 U.S.C. §16538, as amended by America COMPETES Reauthorization Act of 2010 (P.L.111-358);

Department of Energy Organization Act, 42 U.S.C. § 7101 et seq.;

The Economy Act of 1932, as amended (31 US Code 1535);

Internal Revenue Code Section 6103.





MODULE II - PII SYSTEMS & PROJECTS

Taxpayer information is being collected directly from the individual or individual representing a corporation or manufacturer through the 48C application process.

Participation in the program is voluntary. However, companies or individuals who apply for the credit must provide enough information to evaluate the proposal under the established criteria.

2. CONSENT

What opportunities do individuals have to decline to provide information (e.g. where providing information is voluntary) or to consent only to particular uses of the information (other than required or authorized uses)?

Security banners and Privacy notices will be posted on the landing page of the 48C application portal website detailing user privacy and security expectations for using the eXCHANGE system. The posted privacy notices will direct users to both DOE's and IRS's general privacy policies. Within the exCHANGE module, applicants will be required to acknowledge the Privacy Act Statement associated with the collection of 48C FTI prior to submitting an application.

Users may elect to provide access to their submitted applications to other eXCHANGE users via a "Share Submission" function within the application portal. Business or Project Lead/Principle Investigator (PI) contacts with online access to submissions can be provided with submission edit rights, accessing reviewer comments, and viewing decisions when they are published.

All changes to application submissions are logged to indicate the user making the update.

3. CONTRACTS

Are contractors involved with the design, development and maintenance of the system? If yes, was the Privacy Order CRD or Privacy Act clauses included in their contracts? DOE is serving as the service provider to the IRS for the administration of this tax credit program. DOE contractors will be used to develop and administer the cloned eXCHANGE system and will follow appropriate protocols outlined in DOE/IRS agreements and acquisition regulations. Contractors who have any authorized role in this system will be vetted, trained on use of FTI, and agree to rules of behavior and will sign Non-Disclosure Agreements.





The PII collected through the 48C tax credit program is primarily federal tax information, which includes corporate taxpayer numbers (EINs) and potentially individual taxpayer numbers such as SSN's. In addition, corporate applicants may be asked to provide their corporation's assigned Unique Entity Identifier (UEI) Number, which replaces the previous Dun & Bradstreet Number (DUNs) for tracking entities and organizations. A UEI is issued by the System for Award Management (SAM) to identify businesses and other entities that do business with the federal government.

DOE has assessed the ARPA-E eXCHANGE clone being used for the IRS 48C program as a Moderate risk system according to the criteria set forth in Federal Information Processing Standard (FIPS) 199 established by the National Institute of Standards and Technology (NIST). The risk rating is used to determine the effect to the agency should the system's confidentiality, integrity or availability be compromised.

4. IMPACT ANALYSIS:

How does this project or information system impact privacy?

For several years, DOE and IRS have had an established working relationship. In 2013 specifically, DOE worked with the IRS using the eXCHANGE portal for a similar tax program which collected taxpayer information. During this time, eXCHANGE portal managed submissions, registration requirements and collection of applications including concept papers describing proposed projects for the IRS.

This program is collecting and using highly sensitive financial and identification information. The FTI collected, maintained, and accessed through the eXCHANGE system potentially poses a high privacy risk to individuals due to the sensitivity of FTI. Encryption of data at rest and in transit, the masking of TIN, the labeling of FTI data fields, and defined role-based access permissions, are examples of controls in place to protect the data from unauthorized access, modification, or use. The system owner has implemented and tested all baseline security controls appropriate to its FIPS Moderate categorization.

The IRS and DOE have identified the minimum FTI and relevant PII necessary to assess eligibility for the tax credit program, Technical protections include the application of encryption at rest to data maintained within the cloned eXCHANGE system; the masking of TINs to any role outside of the system administrators, in order to reduce the risk to the identity of applicants; and the labeling of data fields containing FTI to ensure the appropriate handling of FTI during processing and authorized disclosures.





MODULE II – PII SYSTEMS & PROJECTS

Only authorized system administrators will have access to original data, including unmasked FTI, within the cloned eXCHANGE system. Multi-factor authentication will be used to authenticate internal authorized users to access eXCHANGE via the DOE network.

Security controls have been implemented to ensure that access to eXCHANGE is restricted according to role, mitigate the risk of accidental sharing and prevent unauthorized use. All users of this system are vetted, trained on FTI and agree to rules of behavior consistent with IRS rules and regulations for accessing this highly sensitive information. This process ensures that controls are operating effectively to mitigate the risk of data (including PII) compromise.

5. SORNs

How will the data be retrieved? Can PII be retrieved by an identifier (e.g. name, unique number or symbol)?

If yes, explain, and list the identifiers that will be used to retrieve information on the individual.

Yes. The eXCHANGE for DOE/IRS tax credit programs (48C) system is designed to retrieve data about individuals using names, email addresses, financial information, taxpayer identification number (TIN), including EINs and SSNs.





MODULE II – PII SYSTEMS & PROJECTS		
	DOE is acting as a service-provider to IRS, to administer this program under IRS's authorities. Therefore, the IRS SORNs below are applicable.	
	Treasury/IRS 24.030, Customer Account Data Engine (CADE) Individual Master File (IMF), 80 Fed. Reg. 54082-54083 (Sept 8, 2015)	
6. SORNs Has a Privacy Act System of Records Notice (SORN) been	Treasury/IRS 24.046 - Customer Account Data Engine Business Master File - 80 FR 54063 (Sept. 8, 2015).	
published in the Federal Register?	Website: https://home.treasury.gov/footer/privacy-act/system-of-records-notices-sorns	
If "Yes," provide name of SORN and location in the Federal Register.	DOE-82 Grant and Contract Records for Research Projects, Science Education, and Related Activities	
	Website: https://www.federalregister.gov/documents/2009/01/09/E8-31316/privacy-act-of-1974-publication-of-compilation-of-privacy-act-systems-of-records	
7. SORNs If the information system is being modified, will the SORN(s) require amendment or revision?	The SORNs does not require modification.	
DATA SOURCES		
8. What are the sources of information about individuals in the information system or project?	Individuals provide their own information or confirm that they are authorized to provide information on behalf of a Company when registering and submitting applications.	
9. Will the information system derive new or meta data about an individual from the information collected?	No. There are no new derived or meta data generated about an individual from the information collected by eXCHANGE.	
10. Are the data elements described in detail and documented?	Yes. Data elements used for the 48C application process and maintained within the cloned eXCHANGE system are documented in a database schema.	





MODULE II – PII SYSTEMS & PROJECTS

DATA USE	
11. How will the PII be used?	The PII collected and stored is for application eligibility verification, correspondence with applicants, tax credit administration, auditing of submitted applications, and management of registered eXCHANGE user accounts. DOE's use of the data is exclusively on behalf of the IRS and defined under the terms of the MOU. The IRS will use this information to verify that the taxpayer is eligible for the § 48C credits. The collection of information is required to obtain a benefit. The eXCHANGE Portal will allow applicants to securely input their data and information for review by DOE and the IRS. Submission of § 48C(e) application materials and data through electronic systems used by DOE, including the eXCHANGE portal, will constitute the authorized representative's approval and electronic signature. Applicants may elect to provide access to their submitted applications to other eXCHANGE users via a "Share Submission" function within the application portal. Business or Project Lead/Principle Investigator (PI) contacts with online access to submissions can be provided with submission edit rights, accessing reviewer comments, and viewing decisions when they are published. All changes to application submissions are logged to indicate the user making the update.
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12. If the system derives meta data, how will the new or meta data be used? Will the new or meta data be part of an individual's record?	N/A





MODULE II – PII SYSTEMS & PROJECTS		
13. With what other agencies or entities will an individual's information be shared?	Applicants may elect to provide access to their submitted applications to other eXCHANGE users via a "Share Submission" function within the application portal. Sharing a submission with another user will give that user access to edit, view submission decisions, and view reviewer comments for all stages of a FOA (Concept Paper and Full Application). Applicants can only share with other authorized users within this system. Applicants can only share the submission with individuals who have registered accounts. Submissions will not be automatically shared if Applicants invite a user to join eXCHANGE, they must follow directions in the "Share Submission" feature of the system. The system administrator role also can share access to submitted applications with appropriate approvals. DOE approved merit reviewers will have access to application information. DOE will provide authorized IRS personnel with access to DOE recommendations for tax credit eligibility. IRS staff will not have direct access to the eXCHANGE system or be provided with administrator accounts. DOE's use of data in the system is strictly defined in the MOA.	
	Accordingly, DOE will not share the data with any party not already contemplated between the parties. Additionally, since IRS's SORNs are intended to control the collection, use, maintenance, and dissemination of this information, DOE will not undertake any sharing governed by any DOE SORN or Routine Use.	
Reports		
14. What kinds of reports are produced about individuals or contain an individual's data?	Standard Reports for reviewer scores against assessment criteria, Ability to export submitted files. Reports are internally generated and are not accessible to applicants for download through the portal.	
15. What will be the use of these reports?	Reports will be used to access tax credit eligibility and scoring against assessment criteria.	
16. Who will have access to these reports?	Access to reports will be defined by and limited by role	
Monitoring		





MODULE II – PII SYSTEMS & PROJECTS		
17. Will this information system provide the capability to identify, locate, and monitor individuals?	Monitoring is not necessary. The system does not collect any outside information about registered users as a function of overseeing progress of user activities. However, if necessary, the capability exists to manually locate information about an individual applicant from information submitted through the system. Manual search is limited to the system administrator role only.	
18. What kinds of information are collected as a function of the monitoring of individuals?	N/A	
19. Are controls implemented to prevent unauthorized monitoring of individuals?	Audit logs will be used to prevent unauthorized monitoring of individual applicants.	
DATA MANAGEMENT & MAINTE	NANCE	
20. How will records about individuals be kept current and verified for accuracy, relevance and completeness? Include PII data collected from sources other than DOE records.	In general, individuals can update and edit their PII in eXCHANGE. Edits and updates can be made to reviewer information by authorized DOE staff and contractors. In addition, reviewers are required to review and certify their profile information on an annual basis.	
21. If the information system is operated in more than one site, how will consistent use of the information be ensured at all sites?	N/A	
Records Management		
22. Identify the record(s).	The records will include submitted applications with taxpayer information; concept papers for projects; and initial assessment determinations from merit reviewers.	
23. Identify the specific disposition authority(ies) that correspond to the record(s) noted in no. 22.	Check appropriately and cite as required. Unscheduled X Scheduled (cite NARA authority(ies) below) Records are Scheduled. IRS records schedules are applicable.	





MODULE II – PII SYSTEMS & PROJECTS

24. Records Contact

Internal Revenue Service

ACCESS, SAFEGUARDS & SECURITY

The cloned eXCHANGE system is designed to protect FTI submitted and assessed under the 48C application process. The following administrative, technical, and physical controls will assist in mitigating privacy risks in the 48C application process, including:

- Strict access control enforcement based on need-to-know
- Before access is granted, DOE employee and contractors and Merit Reviewers undergo background vetting, take training on permissible uses of FTI, and agree to Rules of Behavior.
- Audit Logs and Tracking viewers
- Login.gov Authentication to DOE eXCHANGE application portal (external users)
- Multi-factor authentication to the DOE network (internal users)
- Intrusion detection
- Warning banners and Privacy notices
- Encryption
- Masking of TIN

Encryption of data at rest and in transit, the masking of TIN, the labeling of FTI data fields, and defined role-based access permissions, are examples of controls in place to protect the data from unauthorized access, modification, or use. The system owner has implemented and tested all baseline security controls appropriate to its FIPS Moderate categorization as well as monitoring of the system for vulnerabilities and required security patches. Additionally, the IRS has tested the system against its stringent requirements.

25. What controls are in place to protect the data from unauthorized access, modification or use?



The eXCHANGE IRS 48c system roles consist of the following:

Applicant

Applicants will only have visibility into the concept paper/application they created. Applicants also can create/read/edit/submit both concept papers and formal applications.

Applicants will be able to provide Business or Project Lead/Principle Investigator (PI) contacts with online access to a submission, including submission edit rights, accessing reviewer comments, and viewing decisions when they are published. Applicants must use the Share Submission function.

Sharing a submission allows applicants to give access to other eXCHANGE users to view and edit their submission. This provides access to a submission also gives users access to other stages of the submission process (concept paper and full application). Users with shared access to the submission can view, make changes to, and submit the submission. All changes to the submission are logged to indicate the user making the update.

26. Who will have access to PII data?

Upon entering an e-mail address, the system will determine if the user has already registered in eXCHANGE. If they are not registered, registered users may invite them via e-mail, and assign them once they have registered. If you have questions about this process, please contact lnfrastructureExchangeSupport@hq.doe.gov.

DOE Reviewer

DOE Reviewers will have visibility into ONLY fields within the concept paper and full applications that they need to score to make a recommendation. Reviewers will also have the ability to read and respond to review criteria questions about submissions.

FOA Manager

FOA Managers will have limited visibility to concept paper and full application data They also can read all concept papers and full applications.

FOA Admin

FOA Administrators will have limited visibility to concept paper and full application data. They will also have the ability to read/edit all concept papers and full applications.

48C Admin Manager

48C Managers will have visibility into all concept papers and full applications to administrative and system maintenance purposes. They will also have the ability to read/edit/approve full applications.





MODULE II – PII SYSTEMS & PROJECTS		
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27. How is access to PII data determined?	Based on granted access permissions after determination of valid need-to-know. See answer to 26	
28. Do other information systems share data or have access to the data in the system? If yes, explain.	N/A	
29. For connecting information systems, is there an Interconnection Security Agreement (ISA) or other agreement between System Owners to ensure the privacy of individuals is protected?	There is an MOA/MOU outlining requirement for the administration of the 48C tax credit program between IRS and DOE.	
30. Who is responsible for ensuring the authorized use of personal information?	The Office of the Under Secretary for Infrastructure (S3) which manages the 48C program at DOE is responsible for ensuring appropriate use of the personal information contained within eXCHANGE. Specific roles and access levels will be determined by the S3 team in alignment with IRS security and confidentiality standards.	
END OF MODULE II		





SIGNATURE PAGE		
	Signature	Date
System Owner	(Print Name)	
_	(Signature)	
Local Privacy Act Officer	(Print Name)	
	(Signature)	
Ken Hunt Chief Privacy Officer	(Print Name)	
	(Signature)	

