OTHER TRANSACTION AGREEMENT FOR THE QUANTUM COMPUTER COMPETITION

BETWEEN

THE UNITED STATES DEPARTMENT OF ENERGY

AND

[AWARDEE ENTITY NAME]

The DOE, Office of Science, Advanced Scientific Computing Research, is establishing a Quantum Computer Competition. The purpose of the Quantum Computer Competition is to support the advancement and development of a U.S.-based quantum computer industry through the research and development of technologies that will enable the construction and deployment of full-scale quantum computing systems capable of integration into the U.S. and national laboratory scientific computing infrastructure.

This Milestone-Based Funding Agreement ("Agreement") is made and entered into as of the Effective Date by and between the United States Department of Energy (DOE), an agency of the United States Government (Government), and [Awardee Entity Name] (Awardee)(collectively the Parties), a [type of entity] organized and existing under the laws of [place of incorporation or organization].

NOW, THEREFORE, in consideration of the foregoing and for the mutual promises hereinafter set forth, the Parties agree as follows:

Contents

The following is intended to be understood using the definitions defined in Section IX.

SECTION I: Purpose and Scope of Work

The purpose of this Agreement is to create a public-private partnership in furtherance of the DOE Quantum Genesis Q Competition under which the Awardee will conduct research and development pursuant to the milestones identified in Appendix 1 (Milestones and Completion Criteria). As set forth in Appendix 1, Awardee will receive milestone payments in return for completion of certain Milestones and continue work toward further Milestones while other Milestones serve as a checkpoint to determine whether Awardee can proceed with work toward further milestones or is deselected from the Competition. The scope and objectives of the project are identified in the milestones in Appendix 1 (Milestones and Completion Criteria).

Authorization and funding for subsequent milestones will be contingent upon DOE approval that milestone completion criteria have been met and the availability of appropriated funding to continue work under this Agreement.

Article 1.1: Period of Performance

This Agreement governs the performance of the Milestones.

The Awardee shall commence performance of this Agreement in accordance with the Agreement terms and conditions on the Effective Date and continue until the completion or upon expiration of the deadline, i.e., “Quarter Due (from project start)” for all the Milestones, unless otherwise agreed upon by the parties in writing. Additionally, DOE may terminate the agreement upon a failure to achieve a milestone by such deadline. The completion date for this Agreement is [TBD]. This date may be extended by written mutual agreement of the Parties.

Article 1.2: Financial Obligation

A. Obligation

DOE’s liability to make Milestone Payments is limited to only those funds detailed in this Agreement and the availability of appropriated funding to continue work under this Agreement. For Milestones 3a, 3b, and 3c, the payment amount per successful awardee is variable and subject to the total number of awardees determined by DOE to have successfully achieved the milestone criteria at the designated Evaluation Date.

B. Cost-Share

DOE has determined that Awardees will contribute more toward achieving any technical Milestone set forth in Appendix 1 than the payment due for any Milestone. Therefore, under DOE cost share waiver 2026-007193, DOE waives statutory cost share requirements under Section 988 of EPAct, 42 U.S.C. § 7256(g), and the implementing regulations at 2 C.F.R. § 910.130, and the cost principles set forth in 2 C.F.R. §§ 910.352.

SECTION II: Authority to Enter into the Agreement

Article 2.1: Authority

This is a research, development, and/or demonstration agreement entered into pursuant to DOE's Other Transaction (OT) Authorities, including 42 U.S.C.§ 7256(a), (g).[1] This Agreement between DOE and Awardee is a transaction other than a procurement, grant, cooperative agreement, or loan. Accordingly, only the terms, conditions, provisions and requirements set forth in this Agreement and any other terms, conditions, provisions and requirements prescribed by law and regulations for other transaction agreements under DOE's OT Authorities, including 42 U.S.C.§ 7256(a), (g),[2] some of which are expressly incorporated herein by reference, apply to this Agreement.

This Agreement is valid only if it is in writing and is signed, including electronically, by the Agreements Officer (AO) and by the Awardee's authorized representative.

SECTION III: General

Article 3.1: Agreement

This agreement consists of the Agreement cover page, these articles, plus the following Appendices:

No.	Title
1	Schedule of Payments and Payable Milestones
2	Data Rights Appendix
3	Patent Rights Appendix
4	Authorization and Consent and Notice and Assistance Regarding Patent and Copyright Infringement Appendix
5	Post-Competition IP Considerations

SECTION IV: Intellectual Property

Intellectual Property Rights are governed by the provisions of Appendix 2 – Data Rights and Appendix 3 – Patent Rights.

[1] 2 C.F.R. § 930.
[2] 2 C.F.R. § 930.

SECTION V: Research, Technology and Economic Security (RTES)

Article 5.1: Foreign Entity Participation

Foreign Entities organized in a country that is party to an Office of Science and Technology Policy Quantum Cooperative Agreement (Australia, Denmark, Finland, France, Germany, Japan, Netherlands, Republic of Korea, Sweden, Switzerland, and U.K.) are eligible to participate as either an Awardee or Subawardee. Other Foreign Entities are not eligible to participate either as an Awardee or Subawardee. In limited circumstances DOE may approve a waiver to allow a foreign entity to participate.

Article 5.2: Prohibition on Incorporation in or Ownership or Control by Foreign Countries of Concern

The Awardee shall include this Article in all subcontracts and subawards.

Throughout the life of the Agreement, the Awardee, parent company, and project team members shall not be incorporated in, or owned or controlled by, or subject to the direction of a Foreign Country of Concern. If there is a change in ownership or control that increases foreign ownership or control by a Foreign Country of Concern or a change that effectively makes the entity subject to the direction of a Foreign Country of Concern, the Awardee must immediately alert the AO.

Article 5.3: Entity of Concern Prohibition

The Awardee shall include this Article in all subcontracts and subawards.

No Entity of Concern as defined in Section 10114 of Public Law 117-167 (42 USC 18912) may participate in the performance of the Agreement.

The Awardee must exercise ongoing due diligence to reasonably ensure that no Entity of Concern is participating on the Agreement. If, at any time, the Awardee becomes aware that any participant is an Entity of Concern and therefore is unable to fully comply with this term, the Awardee shall promptly stop all work involving the Entity of Concern, notify the AO within five (5) business days, and not proceed with such work without further DOE authorization.

Article 5.4: Malign Foreign Talent Recruitment Program Prohibition

The Awardee shall include this Article in all subcontracts and subawards.

Individuals participating in a Malign Foreign Talent Recruitment Program, as defined in Section 10638(4) of P.L. 117-167 (42 USC 19237(4), 19232), are prohibited from participating in the performance of the Agreement.

Article 5.5: Due Diligence Reviews and Disclosures

The Awardee shall include this Article in all subcontracts and subawards.

All DOE-supported projects are subject to ongoing research, technology and economic security ("RTES" or "foreign risk") due diligence reviews and monitoring. As part of the RTES due diligence reviews and monitoring, DOE may require the Awardee or project team members to provide additional disclosures and information to inform the reviews.

DOE may require risk mitigation measures, including but not limited to, requiring that an individual or entity not participate in the Agreement.

If significant risks are identified and cannot be sufficiently mitigated, DOE may withhold or recapture a milestone payment or terminate the OTA. DOE's decision regarding a due diligence review is not appealable.

DOE may share information regarding the risks identified as part of the RTES due diligence review process or monitoring with other Federal agencies.

Article 5.6: Transparency of Foreign Connections

<u>The Awardee shall include this Article in all subawards and applicable subcontracts as identified in subsection b of this Article.</u>

a. **Awardee and Subawardees**. The Awardee and subawardee(s) must have an up-to-date Transparency of Foreign Connections (TFC) disclosure on file with DOE.

New subawardees are subject to the RTES due diligence process. Before adding new subawardees to the project, the Awardee must submit a notification to the AO and provide a completed TFC disclosure for the proposed subawardee forty-five (45) calendar days prior to the subawardee beginning work.

b. **Subcontractors**. DOE will take a risk-based approach to determining which subcontractors must provide disclosures and are subject to the RTES due diligence review.

Subcontractors must provide a TFC disclosure where:

1. The subcontractor will have access to IP, trade secrets, confidential information and/or non-public information about the project;
2. The subcontractor is a key partner to the project;
3. The subcontract is equal to or greater than $10 million; or
4. Upon request by DOE.

The Awardee must provide the TFC disclosure to DOE forty-five (45) calendar days prior to the subcontractor beginning work.

c. **Updated Disclosures**. As set forth in the certification statement for the TFC disclosures, during the life of the Agreement, all entities required to complete the TFC disclosures have an ongoing responsibility to update their responses should circumstances arise that impact the accuracy of the previously provided disclosure. The Awardee must notify and provide an updated disclosure to the AO within fifteen (15) business days of learning of the circumstances that change the accuracy of the disclosure previously submitted to DOE for the Awardee, subcontractor, or subawardee.

d. **Disclosure Content, Format and Submission**. The template is available at Transparency of Foreign Connections | Department of Energy (link address: https://www.energy.gov/ia/transparency-foreign-connections). Recognizing the disclosures may contain business confidential information, subcontractors and subawardees may arrange to submit their disclosures directly to DOE.

Article 5.7: Disclosures for Covered Individuals

The Awardee shall include this Article in all subcontracts and subawards.

Covered individuals at the Awardee and subawardee(s) level must have an up-to-date resume and a Malign Foreign Talent Recruitment Certification on file with DOE. As noted in Article 5.3, Covered Individuals include but are not limited to senior and key personnel.

Each new Covered Individual is subject to the RTES due diligence review. The Awardee must notify the AO of new Covered Individuals at least 30 calendar days prior to the requested effective date and must provide a resume and a Malign Foreign Talent Recruitment Certification for each new Covered Individual.

All project participants, which for purposes of this term includes any individuals participating in the project, may be subject to RTES due diligence reviews. DOE reserves the right to require disclosures and certifications for project participants not defined as Covered Individuals.

Article 5.8: Prohibition Related to Collaborations with Restricted Entities

The Awardee shall include this Article in all subcontracts and subawards.

a. Awardee, subawardees, subcontractors, and Covered Individuals are prohibited from collaborating with a Restricted Entity or its employees where the collaboration relates to work funded under this Agreement.
b. Individuals holding appointments or positions with or receiving support from Restricted Entities are prohibited from participating in the performance of the Agreement.

c. Covered Individuals must certify their compliance prior to participating in the project funded under this Agreement.
d. The Awardee must notify Covered Individuals of this prohibition and ensure their compliance. The Awardee must notify DOE AO immediately if it discovers or suspects a violation of this Article may have occurred.
e. Restricted Entity is defined as any entity or individual included on the following U.S. Government Restricted Party Lists:

U.S. Department of War

1. Sec. 1260H of the *National Defense Authorization Act* (NDAA) for FY2021
2. Sec. 1286 of the NDAA for FY2019, as amended

U.S. Department of Commerce, Bureau of Industry and Security

3. Entity List
4. Military End-User Entities
5. Denied Persons

U.S. Department of Treasury, Office of Foreign Assets Control

6. Annex of Executive Order 14032
7. Non-SDN Chinese Military-Industrial Complex Companies

U.S. Department of State

8. Debarred Parties
9. Nonproliferation Sanctions

U.S. Federal Communications Commission:

10. Equipment and Services Covered by Section 2 of The Secure Networks Act

U.S. Department of Homeland Security

11. UFLPA Entity List

U.S. Customs and Border Protection:

Withhold Release Orders & Findings list

Article 5.9: Performance of Work in the United States

The Awardee shall include this Article in all subcontracts and subawards.

All work for this Agreement must be performed in the United States (i.e., the Awardee must expend 100% of the total project cost in the United States), unless the Awardee receives advance written authorization from the AO to perform certain work overseas. This provision does not apply to the acquisition of materials or components of the Awardee's project unless otherwise instructed in writing by the AO.

Article 5.10: Conflicts of Interest

The Awardee shall include this Article in all subcontracts and subawards.

The Awardee shall adopt and maintain a conflict-of-interest (COI) policy under this Agreement, which shall be provided to the DOE upon request. This COI policy shall address both individual COIs as related to Senior and Key Personnel and Organizational COIs.

The Awardee shall disclose in writing to the AO any potential or actual Organizational COI as soon as reasonably practical after discovery thereof. The Awardee shall develop a mitigation plan to address Organizational COIs as they arise and provide it to the AO for approval.

Article 5.11: Restriction on Equipment, Hardware, and Software

No project funds may be used to procure equipment, hardware, or software from entities included on the List of Foreign Institutions Engaging in Problematic Activities to Counter Unauthorized Technology Transfer as designated under Section 1286 of the National Defense Authorization Act of FY 2019 or an Entity of Concern as defined in Section 10114 of Public Law 117-167 (42 USC 18912), absent approval from DOE. The Awardee shall maintain documentation sufficient to demonstrate compliance with this prohibition and is to be made available to DOE upon request. Unless the action is approved by DOE, such costs are also not eligible as allowable Awardee cost share.

SECTION VI: Reporting Requirements and Approvals

Article 6.1: Milestones- Review, Acceptance or Rejection of Milestones

1. The Awardee shall be responsible for the on-time delivery and satisfactory completion of all Milestones. Unless otherwise specified by the AO, in writing, in advance of the deadline, all documents, including reports, are to be furnished to the DOE via email to the AO.
2. DOE shall accept or reject delivered Milestones as promptly as practicable after delivery, unless otherwise specified in the Agreement. DOE shall determine adequacy of each deliverable promptly and will notify the Awardee in writing of the acceptance or rejection of the deliverable within forty (40) business days. DOE's failure to review and accept or reject the work shall not relieve the Awardee from responsibilities under this Agreement, nor create liability for the Government. Acceptance will not be unreasonably withheld or delayed.
3. If DOE rejects the deliverable, the notice of rejection will provide the Awardee a specific description of the identified nonconformity. The Awardee will have the opportunity to cure under a timeline agreed to by the Awardee and the AO.
4. Payment for Milestones.

a. Milestone Payment may only be requested after DOE has notified the Awardee of its acceptance of the Milestone deliverable and verified that the Milestone completion criteria have been met. DOE will provide payment for the completed Milestone within 30 calendar days of receipt of a Milestone payment request submitted in accordance with the paragraphs below. Only the Awardee may submit payment requests to DOE. Subawardees may not submit payment requests directly to DOE. Notwithstanding the foregoing,
b. Milestone Payment Request Submittal. The Awardee is required to submit payment requests electronically through DOE's Oak Ridge Financial Service Center Vendor Inquiry Payment Electronic Reporting System (VIPERS). To access and use VIPERS, they are required to enroll and login to the VIPERS website (https://vipers.doe.gov/ or https://vipers.doe.gov/RequestAccess.aspx). DOE will disburse payments under this Agreement through the Automated Clearing House (ACH) VIPERS. The Awardee may check the status of its payments at the VIPERS website. All payments are made by electronic funds transfer to the bank account identified on the ACH Vendor/Miscellaneous Payment Enrollment Form (SF 3881) filed by the Awardee.
c. Before any payment is submitted, the Awardee shall provide a disclosure of each Subject Invention and a properly executed Invention Certification as required by Article IV.

5. Competitive/Shared Incentive Pool Evaluation (Milestones 3a, 3b, and 3c)

   a. Notwithstanding paragraphs 6.1.2 and 6.1.4.a, Milestones 3a, 3b, and 3c are subject to a synchronized, common evaluation date across all active Awardees ("Evaluation Date"). DOE may unilaterally extend the "Evaluation Date."

   b. **Synchronized Review**: DOE will evaluate all awardees' technical achievements submitted as of the designated Evaluation Date (Quarter 8) simultaneously. Acceptance or rejection decisions for Milestones 3a, 3b, and 3c will be issued following the completion of the evaluation of all submissions.

   c. **Incentive Pool Allocation and Payment Request:** Payment for Milestones 3a, 3b, and 3c is contingent upon DOE's determination of the total number of qualifying awardees for each respective milestone pool. Upon DOE's written determination and notification of the Awardee's calculated share of the applicable incentive pool(s), the Awardee may submit a payment request in VIPERS pursuant to Article 6.1.4.b.

SECTION VII: Modifications, Disputes, Termination, and Assignment

Article 7.1: Modifications

Proposals for modifications will be documented in writing and submitted by the Awardee to the AO, or by DOE to the Awardee. Parties may request the technical, schedule, and financial impact of the proposed modification as appropriate.

Any modification, including changes to the Milestones, to this Agreement shall be executed in writing and signed by an authorized representative of DOE and the Awardee. The DOE is not obligated to pay for costs related to modifications. Further, the Awardee is not obligated to accomplish work prior to mutual agreement between the AO and the Awardee and performs work at risk of not being compensated without mutual agreement, in writing.

For minor or administrative modifications (e.g., changes to the paying office or appropriation data), Awardee approval is not required, unless Awardee timely objects, in writing, to such a proposed minor or administrative modification. In the event of any objection, the modification must be bilaterally executed.

Article 7.2: Disputes

A. A party that believes there is a dispute about an issue under this Agreement will submit to the other party, via email with receipt acknowledged by the other party, a summary of the dispute. Disputes will be raised by the Awardee to the AO or by the AO to the Awardee point of contact. The AO and awardee will work together to resolve issues or disputes, including using any alternative dispute mechanisms to the maximum extent practicable. Informal resolution, including resolution through an alternative dispute resolution mechanism, will be preferred over formal procedures, to the extent practicable.

B. DOE Final Determination. If a dispute is not resolved informally between DOE AO and the Awardee, DOE shall provide a written determination signed by the AO, setting forth DOE's final disposition of such dispute. The determination will include a summary of the dispute and the factual, legal, and if appropriate, policy reasons for DOE's disposition of the dispute.

C. **Right of Appeal:**
   a. The final determination under this Article may only be appealed to the cognizant Senior Procurement Executive (SPE), as defined by 41 U.S.C. 1702(c) for the following actions:
      i. A DOE determination that the awardee has failed to comply with the applicable requirements of the Agreement;
      ii. termination of an award, in whole or in part, by DOE;
      iii. the application of DOE of an indirect cost rate; and
      iv. DOE disallowance of costs.
   b. The appeal must be received by DOE within 90 days of receipt of the final determination. The mailing address for the DOE SPE is 1000 Independence Ave., SW., Washington DC 20585.
   c. In reviewing disputes authorized under this article, the SPE will be bound by the applicable law, statutes, and rules, including the requirements of this Article, and by the terms and conditions of this Agreement.
   d. The decision of the SPE shall be the final decision of DOE.

Article 7.3: Termination

A. Noncompliance. In the event the Awardee failed to comply with the terms and conditions of this Agreement, the AO shall give written notice to the Awardee to comply, including the factual and legal basis for the determination of noncompliance, the corrective actions, and the date by which they must be taken (not less than 30 days), and which of the actions authorized under 2 CFR § 930.345(a) DOE may take if the Awardee does not achieve compliance within the time specified in the written notice. Failure to comply may result in termination of this Agreement;

B. The Parties may mutually agree to terminate in whole or in part this Agreement by providing at least 30 days advance written notice to the other party, provided such notice is preceded by consultation between the Awardee and DOE and a reasonable determination by either party that this Agreement will not produce beneficial results commensurate with the expenditure of resources. Awardee and DOE will negotiate the termination conditions, including the effective date and, in the case of partial termination, the portion to be terminated. If either the Awardee or the DOE determines in the case of partial termination that the reduced or modified portion of the Agreement will not accomplish its intended purpose, the Agreement may be terminated in its entirety;

C. DOE may terminate the agreement in whole or in part if the Awardee materially fails to comply with the articles or terms and conditions of an agreement, whether stated in a Federal statute, regulation, assurance, application, plan, or the notice of award fails to comply with the articles and requirements of the Agreement. DOE shall promptly provide Awardee with a Cure Notice identifying the Material Breach. Within ten (10) days after receipt of the Cure Notice, Awardee shall respond in writing to the Cure Notice and provide DOE with a Cure Plan;

D. DOE may terminate the agreement if the Awardee files a bankruptcy petition that is not dismissed within ten (10) business days, the Awardee is adjudicated bankrupt or is otherwise insolvent, or the Awardee ceases to do business or otherwise terminates its business operations; and

E. DOE may terminate the agreement if the Awardee fails to achieve a Milestone within the time period specified in the Milestones.

F. Either party may terminate without cause upon thirty (30) days written notice to the other party. If DOE terminates without cause, the Awardee shall submit an invoice to DOE based on the prorated fixed price for any remaining Milestone and such proration will be based on effort expended from the last Milestone payment up to the point of termination. The AO, in their discretion, will determine if and how much of an appropriate prorated payment is warranted. Selectee acknowledges and agrees that no other compensation, of any nature or type, shall be payable hereunder following the termination of this Agreement.

G. In the event of termination, DOE and the Awardee shall meet to affect an orderly termination of any ongoing or planned activities and will negotiate in good faith for the disposition of the Awardee's Limited Rights Data in the possession of DOE, if applicable. In no case will the Government be liable for expenses or other financial obligations of the Awardee incurred due to early termination.

H. In the event this Agreement is terminated for any reason under paragraphs A-D of this Article, DOE has the right to unilaterally not pay for funding not yet disbursed pursuant to the Milestones in Appendix 1. Mutual termination does not impose any requirement that DOE pay in whole or part for milestones not achieved.

I. In the event of any termination by DOE, neither DOE nor the Awardee shall be liable for any loss of profits, revenue, or any indirect or consequential damages incurred by the other Party, its contractors, subcontractors, or customers as a result of any termination of this Agreement. DOE's or the Awardee's liability for any damages under this Agreement is limited solely to direct damages, incurred by the other Party, as a result of any termination of this Agreement subject to mitigation of such damages by the complaining party. However, in no instance shall DOE's liability for termination exceed the total amount due under the milestone towards which the Awardee is currently working under this Agreement.

Article 7.4 Assignment

Neither this Agreement nor any interest arising under it will be assigned by the Awardee or DOE without the express written consent of the other party.

SECTION VIII: Miscellaneous

Article 8.1: Export Control

Awardee is responsible for ensuring compliance with all applicable United States Export Control laws and regulations relating to any work performed under a resulting Agreement. The Awardee must immediately report to DOE any export control violations related to this Agreement and provide the corrective action(s) to prevent future violations.

Article 8.2: Communication

A. Administration. Unless otherwise provided in this Agreement, approvals permitted or required to be made by DOE, or any other document that binds the government, may be made only by the DOE Agreements Officer who has a warrant including the award of Other Transaction Agreements. Administrative and contractual matters under this Agreement shall be referred to the following representatives of the Parties:

DOE Agreements Officer: XXXX

DOE Grants and Agreements Specialist: XXXX

DOE Patent Counsel: Aaron Keith, (630) 394-2338, aaron.keith@doe.gov (for all questions regarding Intellectual Property matters)

Awardee: XXXX

B. **Milestone Deliverables.** Milestone deliverable matters under this Agreement shall be referred to the following representative:

DOE Program Manager: XXXX

Awardee: XXXX

C. **Technical.** Technical matters under this Agreement shall be referred to the following representatives:

DOE Program Manager: XXXX

Awardee: XXXX

D. Change of Designated Representative. Each party may change its representatives named in this Article by written notification to the other party.

Article 8.3: Closeout

Upon Agreement completion, the AO must close out the Agreement in accordance with the Federal-Wide Research Terms and Conditions and DOE Standard Research Terms and Conditions Agency Specific Requirements, Financial Assistance Handbook Chapter 30A - Closeout of Financial Assistance Instruments, *2 CFR § 930*, and the DOE Office of Scientific and Technical Information (OSTI) E-Link website (https://www.osti.gov/elink/), including ensuring all deliverables have been accepted and any audits completed. The Awardee agrees to provide DOE all relevant documents requested to closeout this Agreement.

Article 8.4: Resolution of Conflicting Conditions

Any apparent inconsistency between Federal statutes and regulations and the terms and conditions contained in this Agreement must be referred to the AO for guidance.

Article 8.5: Suspension and Debarment

The Awardee shall not contract with entities that are currently listed on the System for Award Management as suspended or debarred in support of this Agreement. In accordance with Executive Orders 12549 and 12689, the regulations at 2 CFR part 180, Guidance for Governmentwide Debarment and Suspension (Non procurement) are applicable to this Agreement.

Article 8.6: Inspector General

A. The Awardee is required to provide any information, documents, site access, or other assistance requested by DOE or Federal auditing agencies (e.g., DOE Inspector General, Government Accountability Office, Defense Contracting Audit Agency, United States Digital Service, Department of Government Efficiency) for work related to this Agreement. Single Audits are not required under this Agreement.

B. In the event that the Awardee has Federal funding from another Federal agency or entity, in accordance with 42 U.S.C. § 7137, the Comptroller General of the United States, or any of his duly authorized representatives, shall have access to and the right to examine any books, documents, papers, records, or other recorded information of the Awardee of Federal funds or assistance under this Agreement, including contracts between the Awardee and other entities.

Article 8.7: System for Award Management

The Awardee is required to be registered in the System for Award Management (SAM, www.sam.gov). The Awardee agrees to opt in to SAM notifications and monitor SAM for DOE issued information.

Article 8.8: Insolvency, Bankruptcy or Receivership

A. The Awardee shall immediately notify DOE of the plans for, or significant likelihood of, any of the following events: (i) the Awardee or the Awardee's parent's filing of a voluntary case seeking liquidation or reorganization under the Bankruptcy Act; (ii) the Awardee's consent to the institution of an involuntary case under the Bankruptcy Act against it or its parent; (iii) the filing of any similar proceeding for or against the Awardee or the Awardee's parent, or its consent to, the dissolution, winding-up or readjustment of its debts, appointment of a receiver, conservator, trustee, or other officer with similar powers over it, under any other applicable state or federal law; or (iv) the Awardee's insolvency due to its inability to pay its debts generally as they become due.
B. Such notification shall be in writing and shall: (i) specifically set out the details of the occurrence of an event referenced in paragraph A; (ii) provide the facts surrounding that event; and (iii) provide the impact such event will have on the project being funded by this Agreement.
C. Upon the occurrence of any of the four events described in the first paragraph, DOE reserves the right to conduct a review of the Awardee's agreement to determine their compliance with the required elements of the agreement. If the DOE review determines that there are significant deficiencies or concerns with the Awardee's performance under the agreement, DOE reserves the right to impose additional requirements, as needed.
D. Failure of the Awardee to comply with this term may be considered a Material Breach of this Agreement.

Article 8.9: Fraud, Waste and Abuse

The Awardee shall disclose, in a timely manner, in writing to DOE all violations of Federal criminal law involving fraud, bribery, or gratuity violations by Awardee, its employees, and agents that potentially affect the agreement. Compliance with the Rules of Professional Conduct does not violate this paragraph. The DOE Office of Inspector General maintains a Hotline for reporting allegations of fraud, waste, abuse, or mismanagement. To report such allegations, please visit https://www.energy.gov/ig/ig-hotline.

Article 8.10: Choice of Law

The Awardee acknowledges that this Agreement is subject to federal law of the United States.

Article 8.11 NONDISCLOSURE AND CONFIDENTIALITY AGREEMENTS ASSURANCES

A. By entering into this Agreement, the Awardee does not and will not require its employees or contractors to sign internal nondisclosure or confidentiality agreements or statements prohibiting or otherwise restricting its employees or contactors from lawfully reporting waste, fraud, or abuse to a designated investigative or law enforcement representative of a federal department or agency authorized to receive such information.

B. The undersigned further attests that Awardee will not implement or enforce any nondisclosure and/or confidentiality policy, form, or agreement it uses in the performance of the Milestones unless it contains the following provisions:

   (1) These provisions are consistent with and do not supersede, conflict with, or otherwise alter the employee obligations, rights, or liabilities created by existing statute or Executive order relating to (a) classified information, (b) communications to Congress, (c) the reporting to an Inspector General or the Office of Special Counsel of a violation of any law, rule, or regulation, or mismanagement, a gross waste of funds, an abuse of authority, or a substantial and specific danger to public health or safety, or (d) any other whistleblower protection. The definitions, requirements, obligations, rights, sanctions, and liabilities created by controlling Executive orders and statutory provisions are incorporated into this agreement and are controlling.

   (2) The limitation above shall not contravene requirements applicable to Standard Form 312, Form 4414, or any other form issued by a Federal department or agency governing the nondisclosure of classified information.

C. Notwithstanding provision listed in paragraph (A), a nondisclosure or confidentiality policy form or agreement that is to be executed by a person connected with the conduct of an intelligence or intelligence-related activity, other than an employee or officer of the United States Government, may contain provisions appropriate to the activity for which such document is to be used. Such form or agreement shall, at a minimum, require that the person will not disclose any classified information received during such activity unless specifically authorized to do so by the United States Government. Such nondisclosure or confidentiality forms shall also make it clear that they do not bar disclosures to Congress, or to an authorized official of an executive agency or the Department of Justice, that are essential to reporting a substantial violation of law.

Article 8.12 CORPORATE FELONY CONVICTION AND FEDERAL TAX LIABILITY ASSURANCES

By entering into this Agreement, the undersigned attests that the Awardee has not been convicted of a felony criminal violation under Federal law in the 24 months preceding the date of signature.

The undersigned further attests that Awardee does not have any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

For purposes of these assurances, the following definitions apply: A Corporation includes any entity that has filed articles of incorporation in any of the 50 states, the District of Columbia, or the various territories of the United States [but not foreign corporations]. It includes both for- profit and non-profit organizations.

Article 8.13 LOBBYING RESTRICTIONS
The Awardee agrees that none of the funds under this Agreement shall be expended, directly or indirectly, to influence congressional action on any legislation or appropriation matters pending before Congress, other than to communicate to Members of Congress as described in 18 U.S.C. § 1913. This restriction is in addition to those prescribed elsewhere in statute and regulation.

Article 8.14 INDEMNIFICATION
To the extent permitted by law, the Awardee will indemnify the Government and its officers, agents, or employees for any and all liability, including litigation expenses and attorneys' fees, arising from suits, actions, or claims of any character for death, bodily injury, or loss of or damage to property or to the environment, resulting from the project, except to the extent that such liability results from the direct fault or negligence of Government officers, agents or employees, or to the extent such liability may be covered by applicable allowable costs provisions.

Article 8.15 STATEMENT OF FEDERAL STEWARDSHIP
DOE will exercise normal Federal stewardship in overseeing the project activities performed under this Agreement. Stewardship activities include, but are not limited to, conducting site visits; reviewing performance and financial reports; providing technical assistance and/or temporary intervention in unusual circumstances to correct deficiencies which develop during the project; assuring compliance with terms and conditions; and reviewing technical performance after project completion to ensure that the Technical Objectives have been accomplished.

Article 8.16 SITE VISITS
DOE authorized representatives have the right to make site visits at reasonable times to review project accomplishments and management control systems and to provide technical assistance, if required. You must provide, and must require your subawardees to provide, reasonable access to facilities, office space, resources, and assistance for the safety and convenience of the government representatives in the performance of their duties. All site visits and evaluations must be performed in a manner that does not unduly interfere with or delay the work.

Article 8.17: Safety, Health, and Access to Information

The Awardee must work with DOE to ensure compliance with all applicable safety, health, access to information, security and environmental regulations. In the event the Awardee fails to comply with said regulations and requirements, the DOE may, without prejudice to any other legal or contractual rights, issue an order stopping all or any part of Awardee's activities with DOE.

SECTION IX: DEFINED TERMS

In addition to terms defined in other provisions of this Agreement, the terms and phrases as defined below, when used herein as the defined term shall have the following meanings:

“AO” shall mean DOE Agreements Officer.

“Covered Individual” means an individual who (a) contributes in a substantive, meaningful way to the scientific development or execution of the scope of work of the agreement, and (b) is designated as a covered individual by DOE. DOE designates as covered individuals any principal investigator (PI); project director (PD); co-principal investigator (Co-PI); co-project director (Co-PD); project manager; and any individual regardless of title that is functionally performing as a PI, PD, Co-PI, Co-PD, or project manager. Submission of a current and pending support disclosure and/or biosketch/resume for a particular person serves as an acknowledgement that DOE designates that person as a covered individual. DOE may further designate covered individuals during the agreement period of performance.

“Data” shall mean recorded information, regardless of form or the media on which it may be recorded, including Technical Data. The term does not include information incidental to Other Transaction (OT) Agreement administration, such as financial, administrative, cost or pricing or management information.

“Effective Date” shall mean the date upon which the Agreement will enter into force which will be the date of the last signatory to the Agreement.

“Foreign Country of Concern” shall mean the People's Republic of China, the Russian Federation, the Democratic People's Republic of Korea, the Islamic Republic of Iran, and Belarus, or any other country determined to be a foreign country of concern by the Secretary of State, and including countries of risk designated by DOE. This list is subject to change. DOE reserves the right, in the exercise of its absolute discretion, to add or subtract any foreign country determined to be of risk consistent with DOE policies by a unilateral amendment to this Agreement.

“Foreign Entity” shall mean any corporation, business association, partnership, trust, society, or any other entity or group that is not incorporated or organized to do business in the United States, as well as international organizations, foreign governments and any agency or subdivision of foreign governments including state-owned enterprises. The term “Foreign Countries of Concern” and “Foreign National” are separate terms and not necessarily covered under the definition of a Foreign Entity although “Foreign Countries of Concern” are also “Foreign Entities”.

“Foreign National” shall mean any individual other than a U.S. citizen.

“Government” shall mean the Federal government of the United States of America including its agencies and departments.

“Intellectual Property” shall mean any and all subject inventions, copyrights, and trademarks developed by an Awardee.

"Key Personnel” shall mean the voting board members, C-suite executives, and other senior personnel identified by Awardee.

*“*Limited rights data*”* shall mean data developed at private expense and first produced outside the performance of this agreement that embody trade secrets, or are commercial, or financial, and confidential or privileged.

“Material Breach” shall mean a breach by the Awardee or DOE of any of its obligations under this Agreement including those which result, or are likely to result, in the inability of the Awardee or DOE to effectively complete the Milestones. This includes but is not limited to the failure to achieve Milestones, breach of provisions included in the Agreement.

“Milestone” shall mean a deliverable identified in Appendix 1 - Milestones, Reporting, Deliverables.

“Milestones” shall mean the collective deliverables identified in Appendix 1- Milestones, Reporting, Deliverables.

“Milestone Payment” shall mean DOE’s payment to the Awardee for achievement of a Milestone.

“Organizational Conflicts of Interest” shall mean where the Awardee is unable, or appears to be unable, to be impartial in conducting activities under this agreement due to its relationships with affiliates, organizations, or any other interested party.

“Unlimited Rights” shall mean the right of the Government to use, disclose, reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, in any manner and for any purpose, and to have or permit others to do so.

“Logical qubit” shall mean a quantum state that is encoded into an error corrected subspace of a larger Hilbert space belonging to multiple physical qubits to suppress errors or environmental noise. The logical basis states span this code space, and logical gate operations act upon this protected representation as they would on an ideal qubit.

“Hard operation” shall mean a logical operation from a family of operations which cannot be performed transversally or directly on the encoded logical qubit scheme (e.g., non-Clifford operations in stabilizer QEC) and require additional resource-intensive procedures in the participant’s error-correction scheme, but necessary to realize computational universality. “Hard” operations are expected to require many elementary quantum operations, becoming the scarce resource in a fault-tolerant computation. In the Q Competition, DOE will benchmark computers in part based on the number of hard operations that can be completed reliably, a metric which acts as a test of both the error rate and the stability of the computer.

“Scientific relevance” shall mean the ability of the quantum computer to usefully solve problems of interest to scientists working in DOE mission spaces. The Blueprint for DOE Quantum Supercomputing highlights key challenges that are relevant to our mission, which themselves cover a range of possible example problems. Prototype computers will demonstrate subroutines (such as phase estimation or Trotter evolution) while the first-generation scientifically relevant quantum computer (SRQC) will be capable of a full demonstration of a scientific workflow (although not necessarily at classically intractable scales), potentially in concert with a classical computer.

IN WITNESS WHEREOF, the Parties have executed this Agreement.

U.S. DEPARTMENT OF ENERGY	**AWARDEE**
By:______________________________	By: _______________________________
[NAME]	[NAME]
Agreements Officer	TITLE
Dated: ________________________________	Dated: ________________________________

Appendix 1: Milestones, Reporting, Deliverables

Milestone #	Milestone Title	Milestone Description (including Completion Criteria)	Data Rights	Subject Invention*	Quarter Due (from project start)	Federal payment upon completion ($)
1	Verification and Validation (V&V) Plan	Provide a detailed technical plan for performing V&V. The plan should include: 1. Details on how to run all circuits provided by DOE designated V&V team of the stated logical widths and depths, as outlined in milestones 2 and 3. 2. Details of the platform's hardest operations (e.g., T or Toffoli). 3. Details of the platform's logical clock cycles. 4. The key subroutines required for the quantum scientific application(s) proposed for the final system. The plan should include a risk analysis of key technical challenges to achieving the milestones.	All data provided to DOE must be delivered with unlimited rights.	None/No R&D	2	$250,000

Milestone #	Milestone Title	Milestone Description (including Completion Criteria)	Data Rights	Subject Invention*	Quarter Due (from project start)	Federal payment upon completion ($)
		The plan must be prepared in consultation with the DOE-designated V&V team. The DOE will have the plan reviewed by subject matter experts and DOE, at its sole discretion, will approve or reject the plan based on its completeness and rigor.				
2	Demonstration of a prototype quantum computer	Demonstrate quantum computer with ten logical qubits for 1,000 logical non-trivial clock cycles (as described in the V&V plan) with fidelity 1/e. Demonstrate quantum circuits over a fully fault-tolerant universal gate set containing at least 50 of the platform's hardest operations (as outlined in the V&V plan). Include details, including compilation and scheduling, of the end-to-end demonstration of the final target milestone demonstration.	All data delivered to DOE may be identified as Protected Data except: 1. General test or performance results demonstrating technical breakthroughs, milestones or achievements.	Standard Definition of Subject Invention	4	$1,250,000

Milestone #	**Milestone Title**	**Milestone Description (including Completion Criteria)**	**Data Rights**	**Subject Invention***	**Quarter Due (from project start)**	**Federal payment upon completion ($)**
		Demonstrate the successful execution of subcircuit(s) from the primary scientific application proposed for the final system. Demonstrations will be executed in collaboration with the V&V teams which may require cloud and/or physical access. Deliverables will be evaluated by the V&V team. The DOE will have reports on the deliverables assessed by subject matter experts and DOE, at its sole discretion, will approve or reject those based on their completeness and rigor.				
3a	Demonstration of a first generation scientifically relevant quantum computer	Demonstrate circuits on at least 100 logical qubits. The circuits will be specified by the V&V team. The specified circuits will be standardized across awardees, and, if implemented on today's reference architecture, would compile to	All data delivered to DOE may be identified as Protected Data except: 1. General test or performance results	Standard Definition of Subject Invention	8	Pro rata share of $100,000,000 incentive pool, calculated across all successful awardees determined at the

Milestone #	Milestone Title	Milestone Description (including Completion Criteria)	Data Rights	Subject Invention*	Quarter Due (from project start)	Federal payment upon completion ($)
		approximately 10^4-10^5 hard operations with a space-time volume of 10^8. It is understood that for a given circuit, the number of hard operations and space-time volume could vary based on genuine innovation and advances in architecture. These circuits are expected to incur additional overhead, such as compilation and routing, which are not accounted for in the above stated baseline figures and are the responsibility of the vendor. The V&V team will assess the correctness of the outputs. Demonstrate the successful execution of the primary scientific application(s) proposed for the final system. Provide detailed technical plan to scale toward the next-generation SRQC, possessing on the order of a	demonstrating technical breakthroughs, milestones or achievements.			Quarter 8 Evaluation Date.

Milestone #	Milestone Title	Milestone Description (including Completion Criteria)	Data Rights	Subject Invention*	Quarter Due (from project start)	Federal payment upon completion ($)
		thousand logical qubits and capable of millions of hard fault-tolerant operations in service of scientific discovery. Demonstrations will be executed by the V&V teams which may require cloud and/or physical access. Deliverables will be evaluated by the V&V team. The DOE will have reports on the deliverables assessed by subject matter experts and DOE, at its sole discretion, will approve or reject those based on their completeness and rigor.				
3b	Demonstration of a first generation scientifically relevant quantum computer – bonus pool 1	Upon completion 3a, demonstrate circuits on at least 150 logical qubits. The circuits will be specified by the V&V team. The specified circuits will be standardized across awardees, and, if implemented on today's reference architecture, would compile to approximately 10^4-10^5	All data delivered to DOE may be identified as Protected Data except: 1. General test or performance results demonstrating	Standard Definition of Subject Invention	8	Pro rata share of $50,000,000 incentive pool, calculated across all successful awardees determined at the Quarter 8 Evaluation Date.

Milestone #	Milestone Title	Milestone Description (including Completion Criteria)	Data Rights	Subject Invention*	Quarter Due (from project start)	Federal payment upon completion ($)
		hard operations with a space-time volume of 10^8. It is understood that for a given circuit, the number of hard operations and space-time volume could vary based on genuine innovation and advances in architecture. These circuits are expected to incur additional overhead, such as compilation and routing, which are not accounted for in the above stated baseline figures and are the responsibility of the vendor. The V&V team will assess the correctness of the outputs. Demonstrations will be executed by the V&V teams which may require cloud and/or physical access. Deliverables will be evaluated by the V&V teams. The DOE will have reports on the deliverables assessed by subject matter experts and DOE, at its sole discretion, will approve or	technical breakthroughs, milestones or achievements.			

Milestone #	**Milestone Title**	**Milestone Description (including Completion Criteria)**	**Data Rights**	**Subject Invention***	**Quarter Due (from project start)**	**Federal payment upon completion ($)**
		reject those based on their completeness and rigor.				
3c	Demonstration of a first generation scientifically relevant quantum computer – bonus pool 2	In addition to the deliverables in 3a and 3b, demonstrate circuits on at least 200 logical qubits. The circuits will be specified by the V&V team. The specified circuits will be standardized across awardees, and, if implemented on today's reference architecture, would compile to approximately 10^4-10^5 hard operations with a space-time volume of 10^8. It is understood that for a given circuit, the number of hard operations and space-time volume could vary based on genuine innovation and advances in architecture. These circuits are expected to incur additional overhead, such as compilation and routing, which are not accounted for in the above stated baseline figures	All data delivered to DOE may be identified as Protected Data except: 1. General test or performance results demonstrating technical breakthroughs, milestones or achievements.	Standard Definition of Subject Invention	8	Pro rata share of $50,000,000 incentive pool, calculated across all successful awardees determined at the Quarter 8 Evaluation Date.

Milestone #	Milestone Title	Milestone Description (including Completion Criteria)	Data Rights	Subject Invention*	Quarter Due (from project start)	Federal payment upon completion ($)
		and are the responsibility of the vendor. The V&V team will assess the correctness of the outputs. Demonstrations will be executed by the V&V team which may require cloud and/or physical access. Deliverables will be evaluated by the V&V team. The DOE will have reports on the deliverables assessed by subject matter experts and DOE, at its sole discretion, will approve or reject those based on their completeness and rigor.				

Note on Milestones 3a–3c: Unlike Milestones 1 and 2, Milestones 3a, 3b, and 3c represent competitive pool milestones evaluated concurrently across all participating entities at Quarter 8 (the Evaluation Date). Milestone achievements will be verified separately for each awardee, and payout amounts will be calculated based on the total number of awardees satisfying the criteria as set forth in Article 6.1.5.

Appendix 2: Data Rights*

**In reading these provisions, any reference to "contractor" or "subcontractor" shall mean "Awardee" or "Subawardee," (as defined in the agreement), the entity performing work (regardless of payment) in the performance of this Agreement. Any reference to "contract" or "subcontract" shall mean "award" or "subaward" in reference to this Agreement (as defined in the Agreement).*

Definitions

Computer Data Bases, as used in this clause, means a collection of data in a form capable of, and for the purpose of, being stored in, processed, and operated on by a computer. The term does not include computer software.

Computer software, as used in this clause, means

computer programs which are data comprising a series of instructions, rules, routines, or statements, regardless of the media in which recorded, that allow or cause a computer to perform a specific operation or series of operations and

data comprising source code listings, design details, algorithms, processes, flow charts, formulae and related material that would enable the computer program to be produced, created or compiled. The term does not include computer databases.

Data, as used in this clause, means recorded information, regardless of form or the media on which it may be recorded. The term includes technical data and computer software. The term does not include information incidental to administration, such as financial, administrative, cost or pricing or management information.

Form, fit, and function data, as used in this clause, means data relating to items, components, or processes that are sufficient to enable physical and functional interchangeability as well as data identifying source, size, configuration, formatting and attachment characteristics, functional characteristics, and performance requirements except that for computer software it means data identifying source, functional characteristics, and performance requirements but specifically excludes the source code, algorithm, process, formulae, and flow charts of the software.

Protected data, as used in this clause, means technical data or commercial or financial data first produced in the performance of the award which, if it had been obtained from and first produced by a non-federal party, would be a trade secret or commercial or financial information that is privileged or confidential under the meaning of 5 U.S.C. 552(b)(4) and which data is marked as being protected data by a party to the award.

Protected rights, as used in this clause, mean the rights in protected data set forth in the Protected Rights Notice of paragraph (g) of this clause.

Limited rights data, as used in this clause, means data (other than computer software) developed at private expense and first produced outside the performance of this award that embody trade secrets, or are commercial, or financial, and confidential or privileged.

Restricted computer software, as used in this clause, means computer software developed at private expense and that is a trade secret; is commercial or financial and is confidential or privileged; or is published copyrighted computer software; including minor modifications of such computer software.

Restricted rights, as used in this clause, means the rights of the Government in restricted computer software, as set forth in a Restricted Rights Notice of subparagraph (g)(3) if included in this clause, or as otherwise may be provided in a collateral agreement incorporated in and made part of this contract, including minor modifications of such computer software.

Technical data, as used in this clause, means that data which are of a scientific or technical nature. Technical data does not include computer software but does include manuals and instructional materials and technical data formatted as a computer database.

Unlimited rights, as used in this clause, means the right of the Government to use, disclose, reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, in any manner and for any purpose whatsoever, and to have or permit others to do so.

Allocation of Rights

(1) Except as provided in paragraph (c) of this clause regarding copyright, the Government shall have unlimited rights in --

(i)Data specifically identified in this agreement as data to be delivered without restriction; and

(ii)All other data delivered under this agreement unless provided otherwise for protected data in accordance with paragraph (g) of this clause, or for limited rights data in accordance with paragraph (h) of this clause.

(2) The Awardee shall have the right to --

(i)Protect rights in protected data delivered under this agreement in the manner and to the extent provided in paragraph (g) of this clause;

(ii)Withhold from delivery those data which are limited rights data to the extent provided in paragraph (h) of this clause;

(iii)Substantiate use of, add, or correct protected rights or copyrights notices and to take other appropriate action, in accordance with paragraph (e) of this clause;

(iv)Establish claim to copyright subsisting in data first produced in the performance of this agreement to the extent provided in paragraph (c)(1) of this clause;

(v)Withhold from delivery any data not specifically identified as a Deliverable under the terms of this agreement and the Milestone Table in Appendix 1 or data which DOE may order in (j); and (vi)Withhold from delivery any computer software.

Copyright

(1) Data first produced in the performance of this agreement. Unless provided otherwise in paragraph(d) of this clause, the Awardee may establish, without prior approval of the Agreement Officer, claim to copyright subsisting in data first produced in the performance of this agreement. When claim to copyright is made, the Awardee shall affix the applicable copyright notices of 17 U.S.C. 401 or 402 and acknowledgement of Government sponsorship (including agreement number) to the data when such data are delivered to the Government, as well as when the data are published or deposited for registration as a published work in the U.S. Copyright Office. For such copyrighted data, including computer software, the Awardee grants to the Government, and others acting on its behalf, a paid-up nonexclusive, irrevocable worldwide license in such copyrighted data to reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, by or on behalf of the Government.

(2) Data not first produced in the performance of this agreement. The Awardee shall not, without prior written permission of the Agreement Officer, incorporate in data delivered under this agreement any data not first produced in the performance of this agreement and which contains the copyright notice of 17 U.S.C. 401 or 402, unless the Awardee identifies such data and grants to the Government, or acquires on its behalf, a license of the same scope as set forth in paragraph (c)(l) of this clause; provided, however, that if such data are computer software the Government shall acquire a copyright license as set forth in paragraph (g)(3) of this clause if included in this agreement or as otherwise may be provided in a collateral agreement incorporated in or made part of this agreement.

(3) Removal of copyright notices. The Government agrees not to remove any copyright notices placed on data pursuant to this paragraph (c), and to include such notices on all reproductions of the data.

Release, Publication, and Use of Data

(1) The Awardee shall have the right to use, release to others, reproduce, distribute, or publish any data first produced or specifically used by the Awardee in the performance of this agreement, except to the extent such data may be subject to the Federal export control or national security laws or regulations, or unless otherwise provided in this paragraph of this clause or expressly set forth in this agreement.

(2) The Awardee agrees that, to the extent it receives or is given access to data necessary for the performance of this agreement which contain restrictive markings, the Awardee shall treat the data in accordance with such markings unless otherwise specifically authorized in writing by the DOE Agreement Officer.

Unauthorized Marking of Data

(1) Notwithstanding any other provisions of this agreement concerning inspection or acceptance, if any data delivered under this agreement are marked with notices or any other restrictive or limiting markings not authorized by this agreement, the DOE Agreement Officer may at any time either return the data to the Awardee or cancel or ignore the markings. However, the following procedures shall apply prior to canceling or ignoring the markings.

(i) The DOE Agreement Officer shall make written inquiry to the Awardee affording the Awardee 30 days from receipt of the inquiry to provide written justification to substantiate the propriety of the markings;

(ii) If the Awardee fails to respond or fails to provide written justification to substantiate the propriety of the markings within the 30-day period (or a longer time not exceeding 90 days approved in writing by the DOE Agreement Officer for good cause shown), the Government shall have the right to cancel or ignore the markings at any time after said period, and the data will no longer be made subject to any disclosure prohibitions.

(iii) If the Awardee provides written justification to substantiate the propriety of the markings within the period set in subdivision (e)(1)(i) of this clause, the DOE Agreement Officer shall consider such written justification and determine whether or not the markings are to be cancelled or ignored. If the DOE Agreement Officer determines that the markings are authorized, the Awardee shall be so notified in writing. If the DOE Agreement Officer determines, with concurrence of the head of the contracting activity, that the markings are not authorized, the DOE Agreement Officer shall furnish the Awardee a written determination, which determination shall become the final agency decision regarding the appropriateness of the markings unless the Awardee files suit in a court of competent jurisdiction within 90 days of receipt of the DOE Agreement Officer 's decision. The Government shall continue to abide by the markings under this subdivision (e)(1)(iii) until final resolution of the matter either by the DOE Agreement Officer 's determination become final (in which instance, the Government shall thereafter have the right to cancel or ignore the markings at any time and the data will no longer be made subject to any disclosure prohibitions), or by final disposition of the matter by court decision, if suit is filed.

(2) The time limits in the procedures set forth in paragraph (e)(1) of this clause may be modified in accordance with agency regulations implementing the Freedom of Information Act (5 U.S.C. 552) if necessary to respond to a request thereunder.

Omitted or Incorrect Markings

(1) Data delivered to the Government without a limited rights notice authorized by paragraph (g) of this clause, the Protected Data notice authorized by paragraph (g) of this clause, or the copyright notice required by paragraph (c) of this clause, shall be deemed to have been furnished with unlimited rights, and the Government assumes no liability for the disclosure, use, or reproduction of such data. However, to the extent the data has not been disclosed without restriction outside the Government, the Awardee may request, within 6 months (or a longer time approved by the DOE Agreement Officer for good cause shown) after delivery of such data, permission to have notices placed on qualifying data at the Awardee's expense, and the DOE Agreement Officer may agree to do so if the Awardee:

(i) Identifies the data to which the omitted notice is to be applied;

(ii) Demonstrates that the omission of the notice was inadvertent;

(iii) Establishes that the use of the proposed notice is authorized; and

(iv) Acknowledges that the Government has no liability with respect to the disclosure, use, or reproduction of any such data made prior to the addition of the notice or resulting from the omission of the notice.

(1) The DOE Agreement Officer may also:

(i) Permit correction at the Awardee's expense of incorrect notices if the Awardee identifies the data on which correction of the notice is to be made, and demonstrates that the correct notice is authorized; or

(ii) Correct any incorrect notices.

Protection of Protected Data

(1) The Awardee may, with the concurrence of DOE (including as agreed upon in Appendix 1 or any subsequent statement of work), claim and mark as protected data, any data first produced in the performance of this award that would have been treated as a trade secret if developed at private expense. Any such claimed "protected data" will be clearly marked with the following "Protected Rights Notice," and will be treated in accordance with such Notice, subject to the provisions of paragraphs (e) and (f) of this clause.

Protected Rights Notice

These protected data were produced under agreement no.
with the U.S. Department of Energy and may not be published, disseminated, or disclosed to others outside the Government until 30 years after the date the data

were first produced, unless express written authorization is obtained from the Awardee or authorized by the provisions under DOE Agreement (PROVIDE THE APPLICABLE AWARD NUMBER). Upon expiration of the period of protection set forth in this Notice, the Government shall have unlimited rights in this data. This Notice shall be marked on any reproduction of this data, in whole or in part.

(End of notice)

(2) Any such marked Protected Data may be disclosed under obligations of confidentiality for the following purposes:

a) For use solely in the evaluation of achieving a milestone under the restriction that the "Protected Data" be retained in confidence and not be further disclosed and that the recipient of the Protected Data will destroy all its copies after completion of the evaluation; or

b) To Subawardee and to any Licensee (includes any licensee or sublicensee (at any tier)) of a license granted by DOE in Appendix 3, for information or use in connection with the work performed under their activity, and under the restriction that the Protected Data be retained in confidence and not be further disclosed.

(3) The obligations of confidentiality and restrictions on publication and dissemination shall end for any Protected Data:

a) At the end of the protected period of the protected data;

b) If the data becomes publicly known or available from other sources without a breach of the obligation of confidentiality with respect to the Protected Data;

c) If the same data is independently developed by someone who did not have access to the Protected Data and such data is made available without obligations of confidentiality; or

d) If the Awardee disseminates or authorizes another to disseminate such data without obligations of confidentiality.

(4) However, the Awardee agrees that the following types of data are not considered to be protected and shall be provided to the Government when required by this award without any claim that the data are Protected Data. The parties agree that, notwithstanding the following lists of types of data, nothing precludes the Government from seeking delivery of additional data in accordance (j) of this Appendix and as specified in Appendix 1 (Milestones and Completion Criteria), or from making publicly available additional non-protected data, nor does the

following list constitute any admission by the Government that technical data not on the list is Protected Data.

(a) *non-enabling* general test or performance results demonstrating technical breakthroughs, milestones or achievements; (b) non-enabling general data demonstrating progress toward meeting DOE's technical targets and (c) any research data contained in publications resulting from the work under the agreement.

(5) The Government's sole obligation with respect to any protected data shall be as set forth in this paragraph (g).
(6) The Government obtains no new rights in pre-existing Data provided such Data is identified with suitable restrictive notice.

Protection of Limited Rights Data

(1) When data other than that listed in paragraphs (b)(1)(i) of this clause are specified to be delivered under this agreement, and such data qualify as limited rights data, the Awardee, if the Awardee desires to continue protection of such data, shall withhold such data and not furnish them to the Government under this agreement. As a condition to this withholding, the Awardee shall identify the data being withheld and furnish form, fit, and function data in lieu thereof.

(2) Notwithstanding paragraph (h)(1) of this clause, the agreement may identify and specify the delivery of limited rights data. If delivery of such data is so required, the Awardee may affix the following "Limited Rights Notice" to the data, and the Government will thereafter treat the data in accordance with such Notice:

Limited Rights Notice

(a) These data are submitted with limited rights under Government agreement No._____ (and subaward/contract No. _, if appropriate). These data may be reproduced and used by the Government with the express limitation that they will not, without written permission of the Awardee, be used for purposes of manufacture nor disclosed outside the Government; except that the Government may disclose these data outside the Government for the following purposes, if any, provided that the Government makes such disclosure subject to prohibition against further use and disclosure:

(1) This "limited rights data" may be disclosed for evaluation purposes to confirm achievement of a milestone under the restriction that the "limited rights data" be retained in confidence and not be further disclosed.

(b) This Notice shall be marked on any reproduction of these data, in whole or in part.

(End of notice)

Subaward/Contract

(1) The Awardee has the responsibility to obtain from its Subawardees/Awardees all data and rights therein necessary to fulfill the Awardee's obligations to the Government under this agreement. If a Subawardee/Awardee refuses to accept terms affording the Government such rights, the Awardee shall promptly bring such refusal to the attention of the Agreement Officer and not proceed with the subaward/contract award without further authorization.

(1) **Additional Data Requirements.**

(1) In addition to the data specified elsewhere in this agreement to be delivered, the DOE Agreement Officer may, only for the purpose of verifying the achievement of a milestone, within a period of 3 years after the achievement of a milestone , order any data first produced or specifically used in the performance of the milestone to achieve a milestone in the award including performance data and all technical data related to achieving the milestone. This clause is applicable to all data ordered under this subparagraph. Nothing contained in this subparagraph shall require the Awardee to deliver any data the withholding of which is authorized by this clause, data which are specifically identified in this agreement as not subject to this clause or computer software. When data are to be delivered under this subparagraph, the Awardee will be compensated for converting the data into the prescribed form, for reproduction, and for delivery.

(k) The terms and conditions of this Clause shall survive this Agreement.

Appendix 3: Patent Rights*

**The standard patent rights clause at 37 CFR 401.14 has been modified to (1) reflect DOE required subcontracting instructions pursuant to 37 CFR 401.5(a); (2) change acquisition terms of contractor, contract and subcontract to financial assistance terms of Awardee, award, subaward or agreement; and (3) include paragraph (m) U.S. competitiveness provision pursuant to the policy of the Determination of Exceptional Circumstances under the Bayh-Dole Act to Further Promote Domestic Manufacture of DOE Science and Energy Technologies executed by DOE on June 7,2021,* as noted in on page 69 of Funding Opportunity Announcement (FOA) number DE-FOA-0002809 in compliance with 42 USC 18645(a) and DOE's U.S. Manufacturing policy (https://www.energy.gov/gc/us-manufacturing).

**In reading these provisions, any reference to "contractor" or "subcontractor" shall mean "Awardee" or "Subawardee," (as defined in the agreement), the entity performing work (regardless of payment) in the performance of this Agreement. Any reference to "contract" or "subcontract" shall mean "award" or "subaward" in reference to this Agreement (as defined in the agreement).* Definitions

(1) Invention means any invention or discovery which is or may be patentable or otherwise protectable under Title 35 of the United States Code, or any novel variety of plant which is or may be protected under the Plant Variety Protection Act (7 U.S.C. 2321 et seq.).

(2) Subject Invention means any invention of the Awardee conceived or first actually reduced to practice in the performance of a milestone listed in Appendix 1 having met its corresponding acceptance criteria defined in Appendix 1 (Milestones and Completion Criteria), for which the Awardee has been or which the DOE confirms will be paid, as described in Article 6.1: Milestones-Review, Acceptance or Rejection of Milestones and where such invention is within the scope of the corresponding "Subject Invention" column corresponding to that milestone, provided that in the case of a variety of plant, the date of determination (as defined in section 41(d) of the Plant Variety Protection Act, 7 U.S.C. 2401(d)) must also occur during the period of agreement performance. Further clarifications to the definition of Subject Invention may be agreed upon by the parties in the listing of milestones in Appendix 1. Notwithstanding the above, the term "Subject Invention" shall not include any Background Invention, any invention made in the performance of a milestone listed in Appendix 1 for which the "Subject Invention" column corresponding to that milestone includes "None/No R&D", or any invention made in the performance of a milestone listed in Appendix 1 other than inventions within the scope of the corresponding "Subject Invention" column of that milestone listed in Appendix 1. Practical Application means to manufacture in the case of a composition or product, to practice in the case of a process or method, or to operate in the case of a machine or system; and, in each case, under such conditions as to establish that the invention

is being utilized and that its benefits are, to the extent permitted by law or government regulations, available to the public on reasonable terms.

(3) Made when used in relation to any invention means the conception or first actual reduction to practice of such invention.

(4) Small Business Firm means a small business concern as defined at section 2 of Pub. L. 85-536 (15 U.S.C. 632) and implementing regulations of the Administrator of the Small Business Administration. For the purposes of this clause, the size standards for small business concerns involved in government procurement and subcontracting at 13 CFR 121.3-8 and 13 CFR 121.3-12, respectively, will be used.

(5) Nonprofit Organization means a university or other institution of higher education or an organization of the type described in section 501(c)(3) of the Internal Revenue Code of 1954 (26 U.S.C. 501(c) and exempt from taxation under section 501(a) of the Internal Revenue Code (25 U.S.C. 501(a)) or any nonprofit scientific or educational organization qualified under a state nonprofit organization statute.

(6) The term statutory period means the one-year period before the effective filing date of a claimed invention during which exceptions to prior art exist per 35 U.S.C. 102(b) as amended by the Leahy-Smith America Invents Act, Public Law 112-29.

(7) Background Invention means an invention identified by the Awardee in Annex__or any invention_which was made prior to or outside of this agreement.

Allocation of Principal Rights

The Awardee may retain the entire right, title, and interest throughout the world to each Subject Invention subject to the provisions of this clause and the Conditional License in Appendix 3 (or 35 U.S.C. 203 if replaced by the Prime Awardee). With respect to any Subject Invention in which the Awardee retains title, the Federal government shall have a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the Subject Invention throughout the world.

Invention Disclosure, Election of Title and Filing of Patent Application by Awardee

(1) The Awardee will disclose each Subject Invention to the Federal Agency prior to the corresponding milestone payment request in Article 6.1: Milestones-Review, Acceptance or Rejection of Milestones of the Agreement that the Awardee has received from an inventor in writing with sufficient detail to enable a patent attorney to reasonably prepare a patent application. After the milestone payment request, the Awardee will disclose any additional subject inventions to the Federal agency within two months after the inventor discloses it in writing with sufficient detail to enable a patent attorney to reasonably prepare a patent application. The disclosure to the agency shall be in the form of a written report and shall identify the agreement under which the invention was made and the inventor(s). It shall be sufficiently complete in technical detail to convey a clear understanding, to the extent known at the time of

the disclosure, of the nature, purpose, operation, and the physical, chemical, biological or electrical characteristics of the invention. The disclosure shall also identify any publication, on sale or public use of the invention, and whether a manuscript describing the invention has been submitted for publication and, if so, whether it has been accepted for publication at the time of disclosure. In addition, after disclosure to the agency, the Awardee will promptly notify the agency of the acceptance of any manuscript describing the invention for publication, or of any on sale or public use planned by the Awardee. The Awardee will provide an Invention Certification (available at https://science.osti.gov/-/media/occ/pdf/Invention-Certification.pdf) including a listings of all Subject Inventions disclosed to the Awardee by an inventor in writing with sufficient detail to enable a patent attorney to reasonably prepare a patent application and made in the performance of a milestone or stating none prior to the milestone payment request in Article 6.1: Milestones-Review, Acceptance or Rejection of Milestones. However, if this agreement is terminated, the Awardee will provide a certification that it committed commercially reasonable efforts to achieve all milestones within two months of termination.

(2) The Awardee will elect in writing whether or not to retain title to any such invention by notifying the Federal agency within two years of disclosure to the Federal agency. However, in any case where a patent, a printed publication, public use, sale, or other availability to the public has initiated the one year statutory period wherein valid patent protection can still be obtained in the United States, the period for election of title may be shortened by the agency to a date that is no more than 60 days prior to the end of the statutory period.

(3) The Awardee will file its initial patent application on a Subject Invention to which it elects to retain title within twenty years after election of title or, if earlier, prior to the end of any statutory period wherein valid patent protection can be obtained in the United States after a publication, on sale, or public use or upon such time that the Awardee becomes owned by, controlled by, or subject to the direction of a DOE-designated Foreign Country of Risk. However, a sale or public use of a Subject Invention shall not be considered as a statutory period shortening the period to file an initial patent application if the Awardee's use of the Subject Invention is consistent with Trade Secret or commercial or financial information that is privileged or confidential under the meaning of 5 U.S.C. 552(b)(4). If the Awardee files a provisional application as its initial patent application, it shall file a non-provisional application within 10 months of the filing of the provisional application.

The Awardee will file patent applications in additional countries or international patent offices within the applicable time period to timely claim priority to the first filed patent application (including extensions granted by the filing of a subsequent Patent Cooperation Treaty (PCT) patent application), or six months from the date permission is granted by the Commissioner of Patents to file foreign patent applications where such filing has been prohibited by a Secrecy Order.

(4) For any Subject Invention with Federal agency and Awardee co-inventors, where the Federal agency employing such co-inventor determines that it would be in the interest of the government, pursuant to 35 U.S.C. 207(a)(3), to file an initial patent application on the Subject Invention, the Federal agency employing such co- inventor, at its discretion and in consultation with the Awardee, may file such application at its own expense, provided that the Awardee retains the ability to elect title pursuant to 35 U.S.C. 202(a).

(5) Requests for extension of the time for disclosure, election, and filing under paragraphs (1), (2), and (3) of this clause may, at the discretion of the Federal agency, be granted. When an Awardee has requested an extension for filing a non-provisional application after filing a provisional application, a one-year extension will be granted, unless the Federal agency notifies the Awardee within 60 days of receiving the request.

Conditions When the Government May Obtain Title

The Awardee will convey to the Federal agency, upon written request, title to any Subject Invention –

(1) If the Awardee fails to disclose a Subject Invention within the times specified in Paragraph (c) of this clause, and the Federal agency determines that the Awardee's failure to disclose was not made in good faith, or if the Awardee fails to elect title to the Subject Invention within the times specified in paragraph (c) of this clause or elects not to retain title and the Awardee has been given at least 30 days to cure the failure to elect title.

(2) In those countries in which the Awardee fails to file patent applications within the times specified in paragraph (c) of this clause; provided, however, that if the Awardee has filed a patent application in a country after the times specified in paragraph (c) of this clause, but prior to its receipt of the written request of the Federal agency, the Awardee shall continue to retain title in that country.

(3) In any country in which the Awardee decides not to continue the prosecution of any non- provisional patent application for, to pay a maintenance, annuity or renewal fee on, or to defend in a reexamination or opposition proceeding on, a patent on a Subject Invention.

(4) Upon breach of paragraph (m) U.S. Competitiveness of this Patent Rights clause.

(2) **Minimum Rights to Awardee and Protection of the Awardee Right to File**

(1) The Awardee will retain a nonexclusive royalty-free license throughout the world in each Subject Invention to which the Government obtains title, except if the Awardee fails to disclose the invention within the times specified in (c), above. The Awardee's license extends to its domestic subsidiary and affiliates, if any, within the corporate structure of which the Awardee is a party and includes the right to grant sublicenses of the same

scope to the extent the Awardee was legally obligated to do so at the time the agreement was awarded. The license is transferable only with the approval of the Federal agency except when transferred to the successor of that party of the Awardee's business to which the invention pertains.

(2) The Awardee's domestic license may be revoked or modified by the funding Federal agency to the extent necessary to achieve expeditious practical application of the Subject Invention pursuant to an application for an exclusive license submitted in accordance with applicable provisions at 37 CFR part 404 and agency licensing regulations (if any). This license will not be revoked in that field of use or the geographical areas in which the Awardee has achieved practical application and continues to make the benefits of the invention reasonably accessible to the public. The license in any foreign country may be revoked or modified at the discretion of the funding Federal agency to the extent the Awardee, its licensees, or the domestic subsidiaries or affiliates have failed to achieve practical application in that foreign country.

(3) Before revocation or modification of the license, the funding Federal agency will furnish the Awardee a written notice of its intention to revoke or modify the license, and the Awardee will be allowed thirty days (or such other time as may be authorized by the funding Federal agency for good cause shown by the Awardee) after the notice to show cause why the license should not be revoked or modified. The Awardee has the right to appeal, in accordance with applicable regulations in 37 CFR part 404 and agency regulations (if any) concerning the licensing of Government-owned inventions, any decision concerning the revocation or modification of the license.

(3) **Awardee Action to Protect the Government's Interest**

(1) The Awardee agrees to execute or to have executed and promptly deliver to the Federal agency all instruments necessary to (i) establish or confirm the rights the Government has throughout the world in those Subject Inventions to which the Awardee elects to retain title, and (ii) convey title to the Federal agency when requested under paragraph (d) above and to enable the government to obtain patent protection throughout the world in that Subject Invention.

(2) The Awardee agrees to require, by written agreement, its employees, other than clerical and nontechnical employees, to disclose promptly in writing to personnel identified as responsible for the administration of patent matters and in a format suggested by the Awardee each Subject Invention made under agreement in order that the Awardee can comply with the disclosure provisions of paragraph (c) of this clause, to assign to the Awardee the entire right, title and interest in and to each Subject Invention made under agreement, and to execute all papers necessary to file patent applications on Subject Inventions and to establish the government's rights in the Subject Inventions. This disclosure format should require, as a minimum, the

information required by paragraph (c)(1) of this clause. The Awardee shall instruct such employees through employee agreements or other suitable educational programs on the importance of reporting inventions in sufficient time to permit the filing of patent applications prior to U.S. or foreign statutory bars.

(3) For each Subject Invention, the Awardee will, no less than 60 days prior to the expiration of the statutory deadline, notify the Federal agency of any decision: Not to continue the prosecution of a non-provisional patent application; not to pay a maintenance, annuity or renewal fee; not to defend in a reexamination or opposition proceeding on a patent, in any country; to request, be a party to, or take action in a trial proceeding before the Patent Trial and Appeals Board of the U.S. Patent and Trademark Office, including but not limited to post-grant review, review of a business method patent, inter partes review, and derivation proceeding; or to request, be a party to, or take action in a non-trial submission of art or information at the U.S. Patent and Trademark Office, including but not limited to a pre-issuance submission, a post-issuance submission, and supplemental examination.

(4) The Awardee agrees to include, within the specification of any United States patent applications and any patent issuing thereon covering a Subject Invention, the following statement, "This invention was made with government support under [insert award number] awarded by U.S. Department of Energy. The government has certain rights in the invention."

Regarding any invention of the Awardee conceived or first actually reduced to practice in the performance of a milestone listed in Appendix 1 and described within the scope of the corresponding "Subject Invention" column of that milestone, the Awardee agrees to maintain rights to fulfill its obligations to the Government under this agreement in the event that such an invention becomes a Subject Invention as defined in section (a).

(4) **Subawards**

(1) The Recipient will include this clause, suitably modified to identify the parties, in all subawards/contracts, regardless of tier, for experimental, developmental, or research work to be performed by a domestic small business firm or nonprofit organization.
(2) The above requirement in (g)(1) does not apply for any agreement with a DOE laboratory. The Recipient and the DOE laboratory shall use a technology transfer agreement (e.g., Strategic Partnership Project (SPP), Cooperative Research and Development Agreement (CRADA)) that is executed by the Recipient and the DOE laboratory and approved by DOE. The technology transfer agreement will provide the applicable patent rights clause for the work to be performed by the DOE laboratory.

(3) In the case of Subawardee/Awardee at any tier, DOE, the Subawardee/Awardee, and Awardee agree that the mutual obligations of the parties created by this clause constitute a contract between the Subawardee/Awardee and DOE with respect to those matters covered by this clause.

(5) Reporting on Utilization of Subject Inventions

Upon the request of DOE, the Awardee agrees to submit periodic reports no more frequently than annually on the utilization of a Subject Invention or on efforts at obtaining such utilization that are being made by the Awardee or its licensees or assignees. Such reports shall include information regarding the status of development, date of first commercial sale or use, gross royalties received by the Awardee, and such other data and information as the agency may reasonably specify. The Awardee also agrees to provide additional reports as may be requested by the agency in connection with any march in proceeding undertaken by the agency, the Conditional License in Appendix 3, U.S. Preference in paragraph (i), or U.S. Competitiveness in section (m). As required by 35 U.S.C. 202(c)(5), the agency agrees it will not disclose such information to persons outside the government without permission of the Awardee.

(6) Preference for United States Industry

Notwithstanding any other provision of this clause, the Awardee agrees that neither it nor any assignee will grant to any person the exclusive right to use or sell any Subject Inventions in the United States unless such person agrees that any products embodying the Subject Invention or produced through the use of the Subject Invention will be manufactured substantially in the United States. However, in individual cases, the requirement for such an agreement may be waived by the Federal agency upon a showing by the Awardee or its assignee that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible.

(7) March-in rights.

The Awardee agrees that with respect to any subject invention in which it has acquired title, DOE has the right in accordance with the procedures in 48 CFR 27.304-1(g) to require the Awardee, an assignee, or exclusive

licensee of a subject invention to grant a nonexclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstances, and if the Awardee, assignee, or exclusive licensee refuses such a request, DOE has the right to grant such a license itself if DOE determines that--

1) Such action is necessary because the Awardee or assignee has not taken, or is not expected to take within a reasonable time, effective steps to achieve practical application of the subject invention in such field of use;

2) Such action is necessary to alleviate health or safety needs which are not reasonably satisfied by the Awardee, assignee, or their licensees;

3) Such action is necessary to meet requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied by the Awardee, assignee, or licensees; or

4) Such action is necessary because the agreement required by paragraph (i) of this clause has not been obtained or waived or because a licensee of the exclusive right to use or sell any subject invention in the United States is in breach of such agreement.

Special Provisions for Agreements with Nonprofit Organizations

If the Awardee is a nonprofit organization, it agrees that:

(1) Rights to a Subject Invention in the United States may not be assigned without the approval of the Federal agency, except where such assignment is made to an organization which has as one of its primary functions the management of inventions, provided that such assignee will be subject to the same provisions as the Awardee;

(2) The Awardee will share royalties collected on a Subject Invention with the inventor, including Federal employee co-inventors (when the agency deems it appropriate) when the Subject Invention is assigned in accordance with 35 U.S.C. 202(e) and 37 CFR 401.10;

(3) The balance of any royalties or income earned by the Awardee with respect to Subject Inventions, after payment of expenses (including payments to inventors) incidental to the administration of Subject Inventions, will be utilized for the support of scientific research or education; and

(4) It will make efforts that are reasonable under the circumstances to attract licensees of Subject Inventions that are small business firms and that it will give a preference to a small business firm when licensing a Subject Invention if the Awardee determines that the small business firm has a plan or proposal for marketing the invention which, if executed, is equally as likely to bring the invention to practical application as any plans or proposals from applicants that are not small business firms; provided, that the Awardee is also satisfied that the small business firm has the capability and resources to carry out its plan or proposal. The decision whether to give a preference in any specific case will be at the discretion of the Awardee. However, the Awardee agrees that the Federal agency may review the Awardee's licensing program and decisions regarding small business applicants, and the Awardee will negotiate changes to its licensing policies, procedures, or practices with the Federal agency when the Federal agency's review discloses that the Awardee could take reasonable steps to implement more effectively the requirements of this paragraph (k)(4). In accordance with 37 CFR 401.7, the Federal agency or the Awardee may request that the Secretary review the Awardee's licensing program and decisions regarding small business applicants.

Communication

All communications under this clause shall be submitted through iEdison https://www.nist.gov/iedison to the extent possible, unless otherwise directed by DOE Patent Counsel. For assistance with iEdison, please contact iedison@nist.gov. For assistance regarding DOE's administration of Subject Inventions or patents, please contact Intellectual Property Law (IPL) at (630) 283-7117 or Chicago- IP@science.doe.gov. All other questions should be directed to:

Aaron R. Keith, Assistant Chief Counsel
Intellectual Property Law
U.S. Department of Energy
9800 S. Cass Ave., Lemont, IL 60439
Email: Aaron.Keith@doe.gov
Phone: (630) 394-2338

(8) **U.S. Competitiveness**

The Awardee agrees that any products embodying any subject invention or produced through the use of any subject invention will be manufactured substantially in the United States unless the Awardee can show to the satisfaction of DOE that it is not commercially feasible. In the event DOE agrees to foreign manufacture, there will be a requirement that the Government's support of the technology be recognized in some appropriate manner, e.g., alternative binding commitments to provide an overall net benefit to the U.S. economy. The Awardee agrees that it will not license, assign or otherwise transfer any subject invention to any entity, at any tier, unless that entity agrees to these same requirements. Should the Awardee or other such entity receiving rights in the invention(s): (1) undergo a change in ownership amounting to a controlling interest, or (2) sell, assign, or otherwise transfer title or exclusive rights in the invention(s), then the assignment, license, or other transfer of rights in the subject invention(s) is/are suspended until approved in writing by DOE. The Awardee and any successor assignee will convey to DOE, upon written request from DOE, title to any subject invention, upon a breach of this paragraph. The Awardee will include this paragraph in all subawards/contracts, regardless of tier, for experimental, developmental or research work.

(9) **The requirements, rights and administration of paragraph (m) are further clarified as follows:**

1) Waivers. The Awardee (or any entity subject to paragraph (m)) may request a waiver or modification of paragraph (m). Such waivers or modifications may be granted when DOE determines that (1) the Awardee (or any entity subject to paragraph (m)) has demonstrated, with quantifiable data, that manufacturing in the United States is not commercially feasible and (2) a waiver or modification would best serve the interests of the United States and the general public.

2) Final determination of breach of paragraph (m). If DOE determines the Awardee is in breach of paragraph (m), the Department may issue a final written determination of such breach. If such determination includes a demand for title to the subject inventions under the award, the demand for title will cause an immediate conveyance and assignment of all rights to all subject inventions under the award to the United States Government, including all pending patent applications and all patents that cover any subject invention, without compensation. Any such final determination shall be signed by the cognizant DOE Agreement Officer with the concurrence of the Assistant General Counsel for Technology Transfer & Intellectual Property. Advanced notice will be provided for comment to the Awardee before any final written determination by DOE is issued.

3) For clarity, if DOE determines that the Awardee is in breach of paragraph (m), the Awardee shall not be entitled to any compensation, or to the license to the subject invention including the reserved license in section (e)(1), unless DOE re-grants a license through a separately agreed upon licensing agreement.

4) The terms and conditions of this Clause shall survive this Agreement.

Appendix 4: Authorization and Consent and Notice and Assistance Regarding Patent and Copyright Infringement

2 CFR 910.362(g)(2) Authorization and Consent

(a) The Government authorizes and consents to all use and manufacture of any invention described in and covered by a United States patent in the performance of this award or any subaward/subcontract at any tier.

(b) The Awardee shall include the substance of this clause, including this paragraph in all subawards/subcontracts that include Appendix 2. However, omission of this clause from any subaward/subcontract, does not affect this authorization and consent.

2 CFR 910.463(g)(3) Notice and Assistance Regarding Patent and Copyright Infringement

(a) The Awardee shall report to the DOE Agreement Officer, promptly and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this award of which the Awardee has knowledge.

(b) In the event of any claim or suit against the Government on account of any alleged patent or copyright infringement arising out of the performance of this award or out of the use of any supplies furnished or work or services performed under this award, the Awardee shall furnish to the Government, when requested by the DOE Agreement Officer , all evidence and information in the Awardee's possession pertaining to such claim or suit. Such evidence and information shall be furnished at the expense of the Government except where the Awardee has agreed to indemnify the Government.

(c) The Awardee shall include the substance of this clause, including this paragraph, in all subawards/subcontracts that include either one or both of Appendix 2 and Appendix 3.

Appendix 5: Post-Competition IP Considerations.

A. If awardee successfully completes any of milestones 3A, 3B, 3C as detailed in Appendix 1, Awardee has the option to enter into negotiations with DOE to waive its Government license under Appendix 2, Paragraph (b)(1) (Data Rights) and Appendix 3, Paragraph (b) (Patent Rights) in exchange for consideration from Awardee commensurate with the Government's Investment in this Award. This consideration may include, but is not limited to:
   1. Access to the scientifically relevant quantum computer generated by Awardee to meet its final milestone or a future, similarly performing quantum computer, to include the number of users, licenses, and compute time. Such access shall be granted for Restricted Government Purpose use to DOE or a U.S. Government or other appropriate transition partner, e.g., an FFRDC or National Laboratory; or
   2. A discounted purchase price for the scientifically relevant quantum computer generated by Awardee to meet its final milestone or another future quantum computer agreed upon by the parties; or
   3. A new collaboration with one of the National Labs involving building or installing the scientifically relevant quantum computer or another future quantum computer agreed upon by the parties at a National Lab; or
   4. Other considerations.

B. Any waiver agreed upon under this Appendix shall not affect, alter, or waive the Government's March-in Rights under Appendix 3, Paragraph (j) or the U.S. Competitiveness requirements under Appendix 3, Paragraph (m).