



State of Minnesota Contract

SWIFT Contract No.: 212924

This Contract is between the State of Minnesota, acting through its Commissioner of the Department of Administration ("State") and Ideal Energies, LLC, whose designated business address is 8318 Pillsbury Ave. S., Bloomington, MN, 55420 ("Contractor"). State and Contractor may be referred to jointly as "Parties."

Recitals

1. State issued a solicitation identified as Solar Power System Design and Installation SWIFT Event No. 2000012539 on January 19, 2022, for a Master Contract with Contractors to provide solar power system design and Installation services, with associated equipment, for state agencies and Cooperative Purchasing Venture ("CPV") members.
2. Contractors in the Master Contract program will respond to site specific solicitations related to this Master Contract and provide responses that are consistent with the purpose, specifications, and requirements of this Master Contract;
3. Any reference to Owner or Site Owner means the State of Minnesota and/or CPV member that has entered into a contract with the Contractor; and
4. Subsequent to an evaluation in accordance with the terms of the Solicitation and negotiation, the Parties desire to enter into a contract.

Accordingly, the Parties agree as follows:

Contract

1. Term of Contract

- 1.1 Effective date. June 1, 2022, or the date the State obtains all required signatures under Minn. Stat. § 16C.05, subd. 2, whichever is later. The Contractor must not begin work under this Contract until this Contract is fully executed and the Contractor has been notified by the State's Authorized Representative to begin the work.
- 1.2 Expiration date. May 31, 2024, or until all obligations have been satisfactorily fulfilled, whichever occurs first. The contract may be extended for up to an additional **three years**, in increments as determined by the State, through a duly executed amendment.
- 1.3 Contract Use. This Contract is not exclusive and shall not be construed as guarantying a minimum or maximum amount of usage.

2. Contractor's Duties

The Contractor shall perform all duties described in this Contract to the satisfaction of the State.

- 2.1 A Site-Specific Solicitation is a solicitation issued under this Master Contract. A Site-Specific Contract is a contract entered into under this Master Contract. The terms of this Master Contract are hereby incorporated into

each Site-Specific Contract. In a Site-Specific Contract, any reference to “State” or “ordering entity” shall mean the state agency or CPV member that executed the Site-Specific Contract.

2.2 The Contractor represents that it is duly qualified and agrees to perform all duties described in this Contract to the satisfaction of the State.

2.3 The Contractor shall provide services that meet or exceed the relevant sections of Exhibit C.

2.4 The Contractor shall provide equipment and designs that meet or exceed the relevant sections of Exhibit C.

2.5 The Contractor shall respond to each Site-Specific Solicitation posted under this Master Contract with either a response meeting the requirements of the site-specific solicitation or written explanation why your company has not provided a response.

2.6 The Contractor shall provide reports and information required by law and the Master Contract as well as reports requested by the administrator of the Master Contract.

2.7 The Contractor shall maintain all licenses and certifications required by law and the Master Contract, including those that may be required in a Site-Specific Contract issued under this Master Contract.

2.8 The prices attached to this Master Contract are ceiling prices for projects meeting substantially the same specifications and requirements that were the basis for the attached pricing. The approach Responder used for setting the attached prices should be used, to the greatest extent possible, when Contractor proposes prices for a site-specific solicitation or Site-Specific Contract.

2.9 The Contractor has been approved to respond to site-specific solicitations that require a proposal for financing.

2.10 The Contractor has been approved to respond to site-specific solicitations in the following Minnesota counties: All Counties.

3. Representations and Warranties

3.1 Under Minn. Stat. §§ 15.061 and 16C.03, subd. 3, and other applicable law the State is empowered to engage such assistance as deemed necessary.

3.2 Contractor warrants that it is duly qualified and shall perform its obligations under this Contract in accordance with the commercially reasonable standards of care, skill, and diligence in Contractor’s industry, trade, or profession, and in accordance with the specifications set forth in this Contract, to the satisfaction of the State.

3.3 Contractor warrants that it possesses the legal authority to enter into this Contract and that it has taken all actions required by its procedures, by-laws, and applicable laws to exercise that authority, and to lawfully authorize its undersigned signatory to execute this Contract, or any part thereof, and to bind Contractor to its terms.

4. Time

The Contractor must comply with all the time requirements described in this Contract. In the performance of this Contract, time is of the essence.

5. Consideration and Payment

5.1 Consideration. The Contractor will receive payment for services as provided by state law and as set forth in the Site-Specific Contract.

5.2 Compensation. The Contractor will be paid in accordance with the breakdown of costs in the Site-Specific Contract.

5.3 Total obligation for Site-Specific Contracts. The total obligation of each Site-Specific Contract will be set forth in the Site-Specific Contract. The total obligation amount may not be increased without an amendment fully executed by both the Site Owner and Contractor.

5.4 Payment.

5.4.1 Invoices. The State will promptly pay the Contractor after the Contractor presents an itemized invoice for the goods received or services actually performed, and the State's Authorized Representative accepts the invoiced goods or services. Invoices must be submitted timely and according to the following schedule: [Schedule provided in site-specific solicitation/contract].

5.4.2 Retainage. Under Minn. Stat. § 16C.08, subd. 2 (10), no more than 90 percent of the amount due under this Contract may be paid until the final product of this Contract has been reviewed by the State. The balance due will be paid when the State determines that the Contractor has satisfactorily fulfilled all the terms of this Contract.

5.4.3 Conditions of payment. All services delivered by the Contractor under this Contract must be performed to the State's satisfaction and in accordance with all applicable federal, state, and local laws, ordinances, rules, and regulations including business registration requirements of the Office of the Secretary of State. The Contractor will not receive payment for work found by the State to be unsatisfactory or performed in violation of federal, state, or local law.

6. Authorized Representative

6.1 State's Authorized Representative. The State's Authorized Representative is Doug Heesch, Division Procurement Coordinator, Office of State Procurement, phone 651-201-2422, email doug.heesch@state.mn.us, or his/her successor or delegate, and has the responsibility to monitor the Contractor's performance and the authority to accept the services provided under this Contract. A Site-Specific Contract will identify the Authorized Representative for Site Owner for that contract. If the services are satisfactory, the Site Owner's Authorized Representative will certify acceptance on each invoice submitted for payment.

6.2 Contractor's Authorized Representative. The Contractor's Authorized Representative is Chris Psihos, President, at the following business address and telephone number: 8318 Pillsbury Ave S., Bloomington, MN, 55420, phone: 612-790-2241, or his/her successor. If the Contractor's Authorized Representative changes at any time during this Contract, the Contractor must immediately notify the State.

7. Exhibits

The following Exhibits are attached and incorporated into this Contract. In the event of a conflict between the terms of this Contract and its Exhibits, or between Exhibits, the order of precedence is first the Contract, and then in the following order:

Exhibit A: Contract Terms

Exhibit B: Insurance Terms

Exhibit C: Specifications, Duties, and Scope of Work

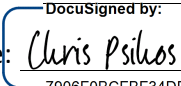
- Exhibit D: Price and Payment Schedule
- Exhibit E: AIA Document A201
- Exhibit F: Module or inverter recycling reporting form
- Exhibit G: Sample Invoice

Any inconsistency among the terms of this Master Contract and its Site-Specific Contracts shall be resolved by giving precedence in the following order: the Site-Specific Contract, this Master Contract, then the exhibits to the Master Contract in the order attached.

1. IDEAL ENERGIES, LLC

The Contractor certifies that the appropriate person(s) have executed the Master Contract on behalf of the Contractor as required by applicable articles, bylaws, resolutions, or ordinances.

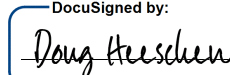
Print name: Chris Psihos

Signature: 
DocuSigned by: 7906F0BCFBF34DD...

Title: President Date: 6/17/2022

2. Office of State Procurement
With delegated authority

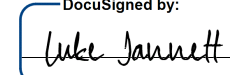
Print name: Doug Heeschen

Signature: 
DocuSigned by: 09FFEC288E945D

Title: Coordinator Date: 6/17/2022

3. Commissioner of Administration
As delegated to The Office of State Procurement

Print name: Luke Jannett

Signature: 
DocuSigned by: 0266C0BD8EF44DE...

Title: Acquisitions Manager Date: 6/17/2022

Exhibit A: Contract Terms

1. Prompt Payment and Invoicing.

- 1.1 Prompt Payment. The State will pay the Contractor pursuant to Minn. Stat. § 16A.124, which requires payment within 30 days following receipt of an undisputed invoice, or merchandise or service, whichever is later. Terms requesting payment in less than 30 days will be changed to read "Net 30 days." Notwithstanding the foregoing, the State may pay the Contractor in advance for purchases as allowed pursuant to Minn. Stat. §16A.065.

The payment for each order will only be made for goods received or services actually performed that have been accepted by the ordering entity, and meet all terms, conditions, and specifications of the Contract and the ordering document.

- 1.2 Invoicing. The invoice must be in the same format as the sample invoice form approved as Exhibit G with the Contract, unless an alternative format is approved in writing by the State Authorized Representative, or delegate. See Exhibit D, Attachment 1, for a list of minimum invoice requirements.

2. Assignment, Amendments, Waiver, and Contract Complete.

- 2.1 Assignment. The Contractor may neither assign nor transfer any rights or obligations under this Contract without the prior consent of the State and a fully executed assignment agreement, executed and approved by the authorized parties or their successors.
- 2.2 Amendments. Any amendment to this Contract must be in writing and will not be effective until it has been executed and approved by the authorized parties or their successors.
- 2.3 Waiver. If the State fails to enforce any provision of this Contract, that failure does not waive the provision or its right to enforce it.
- 2.4 Contract Complete. This Contract contains all negotiations and agreements between the State and the Contractor. No other understanding regarding this Contract, whether written or oral, may be used to bind either party.

3. Termination.

- 3.1 Termination for Convenience. The State or Commissioner of Administration may cancel this Contract at any time, with or without cause, upon 30 days' written notice to the Contractor. Upon termination for convenience, the Contractor will be entitled to payment, determined on a pro rata basis, for services or goods satisfactorily performed or delivered.
- 3.2 Termination for Breach. If the Contractor fails to perform according to the contract terms and conditions, the State is authorized to immediately cancel the Master Contract, a Site-Specific Contract, or purchase order, or any portion of it, and may obtain replacement goods or services and charge the difference of costs to the defaulting Contractor. In the event of default, the State reserves the right to pursue any other remedy available by law. A Contractor may be removed from the vendors list, suspended or debarred from receiving a Contract for failure to comply with terms and conditions of the Contract, or for failure to pay the State for the cost incurred on the defaulted Contract.
- 3.3 Termination for Insufficient Funding. The State may immediately terminate this Contract if it does not obtain funding from the Minnesota Legislature, or other funding source; or if funding cannot be continued at a level sufficient to allow for the payment of the services addressed within this Contract. Termination must be by written notice to the Contractor. The State is not obligated to pay for any services that are

provided after notice and effective date of termination. However, the Contractor will be entitled to payment, determined on a pro rata basis, for services satisfactorily performed to the extent that dedicated funds are available. The State will not be assessed any penalty if the Contract is terminated because of the decision of the Minnesota Legislature, or other funding source, not to appropriate funds. The State must provide the Contractor notice of the lack of funding. This notice will be provided within a reasonable time of the State's receiving notice.

4. Force Majeure.

Neither party shall be responsible to the other or considered in default of its obligations within this Contract to the extent that performance of any such obligations is prevented or delayed by acts of God, war, riot, disruption of government, or other catastrophes beyond the reasonable control of the party unless the act or occurrence could have been reasonably foreseen and reasonable action could have been taken to prevent the delay or failure to perform. A party relying on this provision to excuse performance must provide the other party prompt written notice of the inability to perform and take all necessary steps to bring about performance as soon as practicable.

5. Indemnification.

5.1 In the performance of this Contract, the Indemnifying Party must indemnify, save, and hold harmless the State, its agents, and employees, from any claims or causes of action, including attorney's fees incurred by the State, to the extent caused by Indemnifying Party's:

- Intentional, willful, or negligent acts or omissions; or
- Actions that give rise to strict liability; or
- Breach of contract or warranty.

The Indemnifying Party is defined to include the Contractor, Contractor's reseller, any third party that has a business relationship with the Contractor, or Contractor's agents or employees, and to the fullest extent permitted by law. The indemnification obligations of this section do not apply in the event the claim or cause of action is the result of the State's sole negligence. This clause will not be construed to bar any legal remedies the Indemnifying Party may have for the State's failure to fulfill its obligation under this Contract.

5.2 Nothing within this Contract, whether express or implied, shall be deemed to create an obligation on the part of the State to indemnify, defend, hold harmless or release the Indemnifying Party. This shall extend to all agreements related to the subject matter of this Contract, and to all terms subsequently added, without regard to order of precedence.

6. Governing Law, Jurisdiction, and Venue.

Minnesota law, without regard to its choice-of-law provisions, governs this Contract. Venue for all legal proceedings out of this Contract, or its breach, must be in the appropriate state or federal court with competent jurisdiction in Ramsey County, Minnesota.

7. Contract Use by State Agencies.

To the extent applicable, the Contract does not prohibit state agencies from using their delegated purchasing authority to procure similar goods and services from other sources.

8. **Warranty.** The Contractor warrants to the ordering entity that materials and equipment furnished under the Contract will be free from defects not inherent in the quality required or permitted, and that the work will conform to the requirements of the contract. Work not conforming to these requirements, including substitutions not properly approved and authorized in writing may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, modifications not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If requested, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment used.

All installation materials and labor shall be guaranteed for a period of ten (10) years following the date of final acceptance. During the first year following acceptance, the Contractor shall, upon notification by the ordering entity of any malfunctions, make necessary repairs, including labor, travel, and materials, at the Contractor's expense.

9. **Cooperative Purchasing Venture (CPV) Members.**

The Contract will be available to all CPV members. Minn. Stat. § 16C.03, subd. 10 authorizes the State, acting through its Office of State Procurement, to enter into purchasing agreements with one or more governmental units and other entities allowable by law, as described in Minn. Stat. § 471.59, subd. 1, to exercise jointly the purchasing powers and functions each has individually. This authority is referred to as the Cooperative Purchasing Venture program. For more information, see State website www.mmd.admin.state.mn.us.

The Contractor agrees to extend the Contract to CPV members at the same prices, terms, conditions, and specifications. With the approval of the Contractor, a CPV member may add additional terms to its ordering document applicable to the CPV member's purchasing activities. Such additional terms shall not modify, diminish, or derogate the terms applicable to the State.

10. **Risk of Loss.**

The State is relieved of all risks of loss or damage to the goods and equipment during periods of transportation, installation by the Contractor, or while in the possession of the Contractor or its agent.

11. **Purchase Orders.**

The parties agree that there is no minimum order requirements or charges to process an individual purchase order unless otherwise stated in the Contract. The Purchase Order number must appear on all documents (e.g., invoices, packing slips, etc.).

12. **Equipment Specifications.**

All equipment must meet the contract specifications and all Federal and State safety codes and regulations in effect at the date of manufacture. All equipment must be Original Equipment Manufacturer (OEM) equipment unless otherwise stated in the contract.

13. **Items Offered as New.**

All products, materials, supplies, replacement parts, and equipment offered and furnished must be new, of current manufacturer production, and must have been formally announced by the manufacturer as being commercially available, unless otherwise stated in the Site-Specific Contract.

14. **Subcontracting and Subcontract Payment.**

- 14.1 Subcontracting Allowed. A subcontractor is a person or company that has been awarded a portion of the Contract by Contractor. Only subcontractors that have been approved by the State's Authorized Representative can be used for this Contract. Subcontracting is not allowed for project management.

After the effective date of the Contract, the Contractor shall not, without prior written approval of the State's Authorized Representative, or Site Owner's Authorized representative for a Site-Specific Contract, subcontract for

the performance of any of the Contractor's obligations that were not already approved for subcontracting when the Contract was awarded. During this Contract, if an approved subcontractor is determined to be performing unsatisfactorily by the State's Authorized Representative, the Contractor will receive written notification that the subcontractor can no longer be used for this Contract.

The provisions of the Contract shall apply with equal force and effect to all approved subcontractors engaged by the Contractor. Notwithstanding approval by the State, no subcontract shall serve to terminate or in any way affect the primary legal responsibility of the Contractor for timely and satisfactory performances of the obligations contemplated by the Contract.

14.2 Subcontractor Payment. Contractor must pay any subcontractor in accordance with Minn. Stat. § 16A.1245.

15. Data Disclosure.

Under Minn. Stat. § 270C.65, subd. 3 and other applicable law, the Contractor consents to disclosure of its social security number, federal employer tax identification number, and Minnesota tax identification number, already provided to the State, to federal and state agencies, and state personnel involved in the payment of state obligations. These identification numbers may be used in the enforcement of federal and state laws which could result in action requiring the Contractor to file state tax returns, pay delinquent state tax liabilities, if any, or pay other state liabilities.

16. Government Data Practices.

The Contractor and State must comply with the Minnesota Government Data Practices Act, Minn. Stat. Ch. 13, (or, if the State contracting party is part of the Judicial Branch, with the Rules of Public Access to Records of the Judicial Branch promulgated by the Minnesota Supreme Court as the same may be amended from time to time) as it applies to all data provided by the State under this Contract, and as it applies to all data created, collected, received, stored, used, maintained, or disseminated by the Contractor under this Contract. The civil remedies of Minn. Stat. § 13.08 apply to the release of the data governed by the Minnesota Government Practices Act, Minn. Stat. Ch. 13, by either the Contractor or the State.

If the Contractor receives a request to release the data referred to in this clause, the Contractor must immediately notify and consult with the State's Authorized Representative as to how the Contractor should respond to the request. The Contractor's response to the request shall comply with applicable law.

17. Intellectual Property Rights.

17.1 Definitions. For the purpose of this Section, the following words and phrases have the assigned definitions:

17.1.1 "Documents" are the originals of any databases, computer programs, reports, notes, studies, photographs, negatives, designs, drawings, specifications, materials, tapes, disks, or other materials, whether in tangible or electronic forms, prepared by the Contractor, its employees, agents, or subcontractors, in the performance of this Contract.

17.1.2 "Pre-Existing Intellectual Property" means intellectual property developed prior to or outside the scope of this Contract, and any derivatives of that intellectual property.

17.1.3 "Works" means all inventions, improvements, discoveries (whether or not patentable), databases, computer programs, reports, notes, studies, photographs, negatives, designs, drawings, specifications, materials, tapes, and disks conceived, reduced to practice, created or originated by the Contractor, its employees, agents, and subcontractors, either individually or jointly with others in the performance of this Contract. "Works" includes Documents.

17.2 Ownership. The State owns all rights, title, and interest in all of the intellectual property rights, including copyrights, patents, trade secrets, trademarks, and service marks in the Works and Documents created and paid for under this Contract. The Documents shall be the exclusive property of the State and all such Documents must be immediately returned to the State by the Contractor upon completion or cancellation of this Contract. To the extent possible, those Works eligible for copyright protection under the United States Copyright Act will be deemed to be "works made for hire." The Contractor assigns all right, title, and interest it may have in the Works and the Documents to the State. The Contractor must, at the request of the State, execute all papers and perform all other acts necessary to transfer or record the State's ownership interest in the Works and Documents.

17.3 Pre-existing Intellectual Property. Each Party shall retain ownership of its respective Pre-Existing Intellectual Property. The Contractor grants the State a perpetual, irrevocable, non-exclusive, royalty free license for Contractor's Pre-Existing Intellectual Property that are incorporated in the products, materials, equipment, deliverables, or services that are purchased through the Contract.

17.4 Obligations.

17.4.1 Notification. Whenever any invention, improvement, or discovery (whether or not patentable) is made or conceived for the first time or actually or constructively reduced to practice by the Contractor, including its employees and subcontractors, in the performance of this Contract, the Contractor will immediately give the State's Authorized Representative written notice thereof, and must promptly furnish the State's Authorized Representative with complete information and/or disclosure thereon.

17.4.2 Representation. The Contractor must perform all acts, and take all steps necessary to ensure that all intellectual property rights in the Works and Documents are the sole property of the State, and that neither Contractor nor its employees, agents, or subcontractors retain any interest in and to the Works and Documents. The Contractor represents and warrants that the Works and Documents do not and will not infringe upon any intellectual property rights of other persons or entities.

17.4.3 Indemnification. Notwithstanding any other indemnification obligations addressed within this Contract, the Contractor will indemnify; defend, to the extent permitted by the Attorney General; and hold harmless the State, at the Contractor's expense, from any action or claim brought against the State to the extent that it is based on a claim that all or part of the Works or Documents infringe upon the intellectual property rights of others. The Contractor will be responsible for payment of any and all such claims, demands, obligations, liabilities, costs, and damages, including but not limited to, attorney fees. If such a claim or action arises, or in the Contractor's or the State's opinion is likely to arise, the Contractor must, at the State's discretion, either procure for the State the right or license to use the intellectual property rights at issue or replace or modify the allegedly infringing works or documents as necessary and appropriate to obviate the infringement claim. This remedy of the State will be in addition to and not exclusive of other remedies provided by law.

18. Copyright.

The Contractor shall save and hold harmless the State of Minnesota, its officers, agents, servants and employees, from liability of any kind or nature, arising from the use of any copyrighted or noncopyrighted compositions, secret process, patented or nonpatented invention, article or appliance furnished or used in the performance of the Contract.

19. Assignment of Antitrust Rights.

Upon the request of the State of Minnesota, Contractor will irrevocably assign to State any state or federal antitrust claim or cause of action that the Contractor now has or which may accrue to the Contractor in the future, in connection with any goods, services, or combination provided by Contractor under the terms of this Contract.

20. Survivability of Orders.

In the event the term of any Site-Specific Contract (“Order”) placed under this Master Contract extends past the termination or expiration of this Master Contract, the terms and conditions of this Master Contract shall remain in full force and effect as it applies to such Order and will continue in effect for such Order until the term of that Order expires or the Order is cancelled or terminated in accordance with the terms of this Master Contract.

21. Contractor’s Documents.

Any licensing and maintenance agreement, or any order-specific agreement or document, including any pre-installation, linked or “click through” agreement that is allowed by, referenced within or incorporated within the Contract whenever the Contract is used for a State procurement, whether directly by the Contractor or through a Contractor’s agent, subcontractor or reseller, is agreed to only to the extent the terms within any such agreement or document do not conflict with the Contract or applicable Minnesota or Federal law, and only to the extent that the terms do not modify, diminish or derogate the terms of the Contract or create an additional financial obligation to the State. Any such agreement or document must not be construed to deprive the State of its sovereign immunity, or of any legal requirements, prohibitions, protections, exclusions or limitations of liability applicable to this Contract or afforded to the State by Minnesota law. A State employee’s decision to choose “accept” or an equivalent option associated with a “click-through” agreement does not constitute the State’s concurrence or acceptance of terms, if such terms are in conflict with this section.

22. State Audits.

Under Minn. Stat. § 16C.05, subd. 5, the Contractor’s books, records, documents, and accounting procedures and practices relevant to this Contract are subject to examination by the State, the State Auditor, or Legislative Auditor, as appropriate, for a minimum of six years from the expiration or termination of this Contract.

23. Usage Reports.

Contractor must track and report to the State usage data on this Contract (Usage Reports). Usage Reports should be sent via email to osp.usagereports@state.mn.us. A Usage Report must identify the State Contract Number and provide the following information:

- The total amount of spend under the Contract by the State and other entities,
- The total amount of spend by State agencies, and
- The total amount of spend by other entities (CPV members).

Contractor must send an annual Usage Report, or as otherwise requested. An annual usage report is due within thirty days of the Contract execution anniversary date. A requested Usage Report is due within thirty days from when the request was made. Contractor must provide the State with a final Usage Report within 30 calendar days of the expiration or termination of the Contract. Failure to provide a Usage Report may result in the State cancelling the Contract. This term survives the expiration or termination of the Contract.

24. Diverse Spend Reporting.

If the total value of the Contract may exceed \$500,000, including all extension options, Contractor must track and report, on a quarterly basis, the amount paid to diverse businesses both: 1) directly to subcontractors performing under the Contract, and 2) indirectly to diverse businesses that provide supplies/services to your company (in proportion to the revenue from this Contract compared to Contractor’s overall revenue). When this applies, Contractor will register in a free portal to help report the Tier 2 diverse spend, and the requirement continues as long as the Contract is in effect.

25. Publicity and Endorsement.

- 25.1 Publicity. Any publicity regarding the subject matter of this Contract must identify the State as the sponsoring agency and must not be released without prior written approval from the State’s Authorized Representative. For purposes of this provision, publicity includes notices, informational pamphlets, press

releases, information posted on corporate or other websites, research, reports, signs, and similar public notices prepared by or for the Contractor individually or jointly with others, or any subcontractors, with respect to the program, publications, or services provided resulting from this Contract.

25.2 Endorsement. The Contractor must not claim that the State endorses its products or services.

26. Debarment by State, its Departments, Commissions, Agencies, or Political Subdivisions.

Contractor certifies that neither it nor its principals is presently debarred or suspended by the Federal government, the State, or any of the State's departments, commissions, agencies, or political subdivisions. Contractor's certification is a material representation upon which the Contract award was based. Contractor shall provide immediate written notice to the State's Authorized Representative if at any time it learns that this certification was erroneous when submitted or becomes erroneous by reason of changed circumstances.

27. Contingency Fees Prohibited.

Pursuant to Minn. Stat. § 10A.06, no person may act as or employ a lobbyist for compensation that is dependent upon the result or outcome of any legislation or administrative action.

28. Certification of Nondiscrimination (in accordance with Minn. Stat. § 16C.053).

If the value of this Contract, including all extensions, is \$50,000 or more, Contractor certifies it does not engage in and has no present plans to engage in discrimination against Israel, or against persons or entities doing business in Israel, when making decisions related to the operation of the vendor's business. For purposes of this section, "discrimination" includes but is not limited to engaging in refusals to deal, terminating business activities, or other actions that are intended to limit commercial relations with Israel, or persons or entities doing business in Israel, when such actions are taken in a manner that in any way discriminates on the basis of nationality or national origin and is not based on a valid business reason.

29. Non-discrimination (in accordance with Minn. Stat. § 181.59).

The Contractor will comply with the provisions of Minn. Stat. § 181.59.

30. E-Verify Certification (in accordance with Minn. Stat. § 16C.075).

For services valued in excess of \$50,000, Contractor certifies that as of the date of services performed on behalf of the State, Contractor and all its subcontractors will have implemented or be in the process of implementing the federal E-Verify Program for all newly hired employees in the United States who will perform work on behalf of the State. Contractor is responsible for collecting all subcontractor certifications and may do so utilizing the E-Verify Subcontractor Certification Form available at <http://www.mmd.admin.state.mn.us/doc/VerifySubCertForm.doc>. All subcontractor certifications must be kept on file with Contractor and made available to the State upon request.

31. Affirmative Action Requirements

The State intends to carry out its responsibility for requiring affirmative action by its contractors.

31.1 Covered Contracts and Contractors. If the Contract exceeds \$100,000 and the Contractor employed more than 40 full-time employees on a single working day during the previous 12 months in Minnesota or in the state where it has its principal place of business, then the Contractor must comply with the requirements of Minn. Stat. § 363A.36 and Minn. R. 5000.3400-5000.3600.

31.2 General. Minn. R. 5000.3400-5000.3600 implements Minn. Stat. § 363A.36. These rules include, but are not limited to, criteria for contents, approval, and implementation of affirmative action plans; procedures for issuing certificates of compliance and criteria for determining a contractor's compliance status; procedures for addressing deficiencies, sanctions, and notice and hearing; annual compliance reports; procedures for compliance review; and contract consequences for non-compliance. The specific criteria for approval or rejection of an affirmative action plan are contained in various provisions of Minn. R. 5000.3400-5000.3600 including, but not limited to, Minn. R. 5000.3420-5000.3500 and 5000.3552-5000.3559.

- 31.3 Disabled Workers. The Contractor must comply with the following affirmative action requirements for disabled workers.

AFFIRMATIVE ACTION FOR DISABLED WORKERS

31.3.1 The Contractor must not discriminate against any employee or applicant for employment because of physical or mental disability in regard to any position for which the employee or applicant for employment is qualified. The Contractor agrees to take affirmative action to employ, advance in employment, and otherwise treat qualified disabled persons without discrimination based upon their physical or mental disability in all employment practices such as the following: employment, upgrading, demotion or transfer, recruitment, advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship.

31.3.2 The Contractor agrees to comply with the rules and relevant orders of the Minnesota Department of Human Rights issued pursuant to the Minnesota Human Rights Act.

31.3.3 In the event of the Contractor's noncompliance with the requirements of this clause, actions for noncompliance may be taken in accordance with Minn. Stat. § 363A.36, and the rules and relevant orders of the Minnesota Department of Human Rights issued pursuant to the Minnesota Human Rights Act.

31.3.4 The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices in a form to be prescribed by the Commissioner. Such notices must state the Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified disabled employees and applicants for employment, and the rights of applicants and employees.

31.3.5 The Contractor must notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of Minn. Stat. § 363A.36, of the Minnesota Human Rights Act and is committed to take affirmative action to employ and advance in employment physically and mentally disabled persons.

- 31.4 Consequences. The consequences for the Contractor's failure to implement its affirmative action plan or make a good faith effort to do so include, but are not limited to, suspension or revocation of a certificate of compliance by the Commissioner, refusal by the Commissioner to approve subsequent plans, and termination of all or part of this Contract by the Commissioner or the State.

- 31.5 Certification. The Contractor hereby certifies that it is in compliance with the requirements of Minn. Stat. § 363A.36 and Minn. R. 5000.3400-5000.3600 and is aware of the consequences for noncompliance.

32. Equal Pay Certification.

If required by Minn. Stat. §363A.44, the Contractor must have a current Equal Pay Certificate prior to Contract execution. If Contractor's Equal Pay Certificate expires during the term of this Contract, Contractor must promptly re-apply for an Equal Pay Certificate with the Minnesota Department of Human Rights and notify the State's Authorized Representative once the Contractor has received the renewed Equal Pay Certificate. If Contractor claims to be exempt, the State may require Contractor to verify its exempt status.

33. Hazardous Substances.

To the extent that the goods to be supplied to the State by the Contractor contain or may create hazardous substances, harmful physical agents, or infectious agents, as set forth in applicable State and federal laws and regulations, the Contractor must provide the State with Material Safety Data Sheets regarding those substances. A copy must be provided upon request. Goods and containers supplied to the State must be labeled in compliance with state and federal laws, rules, and regulations.

These terms apply to goods supplied under this contract:

- 33.1 Products Containing Triclosan Banned. The Contractor must comply with Minn. Stat. § 145.945.
- 33.2 Products Containing Certain Types of Polybrominated Diphenyl Ether Banned. The Contractor must comply with Minn. Stat. § 325E.385-325E.388).
- 33.3 Coal Tar Sealant Use and Sale Prohibited. The Contractor must comply with Minn. Stat. § 116.202.
- 33.4 Products Containing Mercury. The Contractor must comply with Minn. Stat. 116.92.

34. Background Security Compliance.

Background check and security requirements may be included in Site-Specific solicitations or contracts.

35. Drug Testing.

Drug testing requirements may be included in Site-Specific solicitations or contracts.

36. Survival of Terms.

The following clauses survive the expiration or cancellation of this Contract: Indemnification; State Audits; Government Data Practices; Intellectual Property; Publicity and Endorsement; Governing Law, Jurisdiction, and Venue; and Data Disclosure. Any other Contract term that expressly states or by its nature shall survive, shall survive.

37. Vaccination/Testing Requirements

Vaccination and testing requirements may be included in Site-Specific solicitations or contracts.

38. Responsible Contractor Requirement (Minn. Stat. § 16C.285, subd. 3).

List and submit all first-tier Subcontractors on Supplement 2, titled "Supplement 2 – First-Tier Subcontractors List." This may be submitted with the response, but it must be submitted prior to contract execution. If additional Subcontractors are added to a project after execution of a contract, complete and submit the attachment titled "Supplement 3 Additional Subcontractors List" within 14 days of retaining the additional Subcontractors. Supplement 3 verifies the additional Subcontractors have been certified as in compliance with the requirements of Minn. Stat. § 16C.285. Upon request from the ordering entity, the Contractor shall submit copies of the signed certifications of compliance from all Subcontractors of any tier.

39. Prevailing Wage.

All State funded or partially State funded work against this contract is subject to the prevailing wage requirements pursuant to Minnesota Statutes 177.41 to 177.44 and corresponding Minnesota Rules 5200.1000 to 5200.1120 as established by the Minnesota Department of Labor and Industry. Specifically, all contractors and all tiers of subcontractors must pay all laborers and mechanics the established prevailing wages for work performed under the contract. Failure to comply with the aforementioned may result in civil or criminal penalties.

Work under this contract includes, but is not limited to, installation of solar panels and racks, installation of electrical wiring and equipment, landscaping work, fencing installation, foundation work, and other work subject to prevailing wage statutes. See <https://www.revisor.mn.gov/rules/?id=5200.1102> and <https://www.revisor.mn.gov/rules/?id=5200.1100>.

The Contractor and Subcontractor shall furnish to the ordering entity all payrolls, of all workers on the project, via email as attachments, to the email address provided on the purchase order. If an email address is not included on the purchase order, contact the ordering entity to obtain the appropriate email address.

The Contractor and Subcontractor must submit the State of Minnesota Prevailing Wage Payroll Report and Statement of Compliance Form within fourteen (14) days after the end of each pay period. The forms are available on the Office of State Procurement (OSP) website at <http://www.mmd.admin.state.mn.us/mn02000.htm>. No other payroll forms will be accepted to meet this requirement.

The Contractor and Subcontractor must complete the Prevailing Wage Payroll Report in Microsoft Excel, and the Statement of Compliance in an Adobe PDF format. The subject line of the email must provide the company name, contract/purchase order number, and pay period ending dates.

The Department of Labor and Industry has a web page with Frequently Asked Questions about prevailing wages at <http://www.dli.mn.gov/business/employment-practices/prevailing-wage-information>

For questions regarding the Prevailing Wage Laws, contact the Department of Labor and Industry at 651.284.5091.

40. Federal Davis-Bacon Prevailing Wage.

[Option 1] Federally funded or partial federally funded projects are subject to the Davis-Bacon Act which requires that all contractors and all tier of subcontractors performing on federally funded projects (and contractors or subcontractors performing on federally assisted contracts under the related Acts) in excess of \$2,000 pay their laborers and mechanics not less than the prevailing wage rates and fringe benefits listed in the contract's Davis-Bacon wage determination for corresponding classes of laborers and mechanics employed on similar projects in the area.

If a project is federally funded and Davis-Bacon prevailing wages are required, the ordering entity shall notify the contractor of this requirement upon a request for quotation. The ordering entity must download the Davis-Bacon wage determination for the county in which the project will take place. See Federal Wage Determinations Onlin.gov at <http://www.wdol.gov/dba.aspx>. If State and federal funds are being used to fund a project both State and federal prevailing wage requirements and wage rates must be included on the order. If the Davis-Bacon hourly rate classification is higher than the State's prevailing wage classification contractors may adjust their labor rate per classification.

[Option 2] Federally funded or partial federally funded projects are subject to the Davis-Bacon Act which requires that all contractors and all tier of subcontractors performing on federally funded projects (and contractors or subcontractors performing on federally assisted contracts under the related Acts) in excess of \$2,000 pay their laborers and mechanics not less than the prevailing wage rates and fringe benefits listed in the contract's Davis-Bacon wage determination for corresponding classes of laborers and mechanics employed on similar projects in the area.

Form WH-347 has been made available for the convenience of contractors and subcontractors required by their Federal or Federally-aided construction-type contracts and subcontracts to submit weekly payrolls <https://www.dol.gov/agencies/whd/forms/wh347>. Properly filled out, this form will satisfy the requirements of Regulations, Parts 3 and 5 (29 C.F.R., Subtitle A), as to payrolls submitted in connection with contracts subject to the Davis-Bacon and related Acts.

The Contractor and Subcontractor shall furnish to the ordering entity all payrolls, of all workers on the project, via email as attachments, to the email address provided on the purchase order. If an email address is not included on the purchase order, contact the ordering entity to obtain the appropriate email address.

41. CPV Requirements.

CPV members are responsible to confirm if they are subject to rules, regulations, or ordinances which establish the prevailing wage rate as defined in Minn. Stat. § 177.42.

42. How to Provide Information for the Minnesota Department of Transportation (MnDOT).

After receiving orders from MnDOT, Contractors are required to provide payroll information in the time frame specified by Statute and in the method specified by MnDOT below.

To meet Minn. Stat. § 177.43 requirements, the Contractor and Subcontractor(s) shall submit payroll forms according to MnDOT (Office of Construction, Transportation Building, Mail Stop 650, 395 John Ireland Blvd., St. Paul, MN 55155-1899) requirements.

- 42.1 All Contractors shall submit a payroll statement to the Department of Transportation, Minn. Stat. § 177.44, Subd. 7. The statement shall be submitted based on the Contractor's payment schedule. If a Contractor pays its employees biweekly, a payroll statement shall be submitted biweekly (MnDOT Contract Administration Manual, Section .320). All Contractors shall pay its employees at least once every 15 days on a date designated in advance by the employer (Minn. Stat. § 181.10).
- 42.2 Each Statement submitted shall include all employees that performed work under the contract and provide at a minimum the following information (Minn. Rules 5200.1106, Subpart 10 and Minn. Stat. § 177.30):
 - 42.2.1 Contractor's name, address, and telephone number.
 - 42.2.2 State project number.
 - 42.2.3 Payroll report number.
 - 42.2.4 Project location.
 - 42.2.5 Workweek ending date.
 - 42.2.6 Name, social security number, and home address for each employee.
 - 42.2.7 Labor classification(s) and/or three-digit code for each employee.
 - 42.2.8 Hourly straight time and overtime wage rates paid to each employee.
 - 42.2.9 Daily and weekly hours worked in each labor classification, including overtime hours for each employee.
 - 42.2.10 Authorized legal deductions for each employee.
 - 42.2.11 Project gross amount, weekly gross amount and net wages.
- 42.3 Payroll records may be submitted in any form provided it includes all the information contained in Subpart A (1-11) of this section. However, Contractors needing a payroll form may utilize the "front side" of the U.S. Department of Labor's, WH-347 Payroll Form. This form is available by visiting the Labor Compliance website (www.dot.state.mn.us/const/labor).
- 42.4 All payroll records must be accompanied with a completed and signed MnDOT 21658 – Statement of Compliance Form (Minn. Rules 5200.1106, Subpart 10).
- 42.5 The prime contractor is responsible for assuring that its payroll records and those of all subcontractors include all employees that performed work under this contract and accurately reflect the hours worked, regular and overtime rates of pay and classification of work performed (Minn. Stat. § 177.30(1)(2)(3)(4)).

- 42.6 The prime contractor is responsible to maintain all certified payroll records, including those of all subcontractors, throughout the course of a construction project and retain all records for a period of three years after the final contract voucher has been issued (Minn. Stat. § 177.30(4)).
- 42.7 At the end of each pay period, each contractor shall provide every employee, in writing an accurate, detailed earnings statement (Minn. Stat. § 181.032).
- 42.8 Upon request from the Minnesota Department of Labor and Industry (MN/DLI) or the Department of Transportation, the prime contractor shall promptly furnish copies of payroll records for its workers and those of all subcontractors, along with records, deemed appropriate by the requesting agency to determine compliance with these contract provisions (Minn. Stat. § 177.44, subd. 7 and Minn. Rules 5200.1106, Subpart 10).
- 42.9 At the Department of Transportation's discretion, the project engineer may administer the submission of payroll records according to MnDOT's Payroll Maintenance Program. The guidelines for the implementation and administration of this program are outlined in the MnDOT Contract Administration Manual, Section A(4)(d).
- 42.10 If, after written notice, the prime contractor fails to submit its payroll reports and certification forms and those of any subcontractor, the Department of Transportation may implement the actions prescribed in State Funded Construction Contracts Special Provisions Division A – Labor, Section XVI. NON-COMPLIANCE AND ENFORCEMENT available on-line at:
<http://www.dot.state.mn.us/const/labor/documents/contractdocs/specprovidivastate.pdf>.

43. Building Construction Contractor Registration.

Per Minn. Stat. § 326B.701, unless exempt, any person, as defined by Minn. Stat. § 181.723, subd. 1(a), who performs public or private construction services must register with the Department of Labor and Industry (DLI). Registration is required prior to receiving a contract award.

- 43.1 Building construction contractors, including independent contractors, subcontractors, and business entities providing public or private sector commercial or residential building construction or improvement services must be registered with DLI.
- 43.2 The registration requirement does not apply to workers and businesses that are already licensed, registered, or certified with the Department of Labor and Industry, nor does it apply to employees.
- 43.3 General or Prime Contractors will be able to verify that subcontractors are registered on the searchable Department of Labor and Industry Contractor Look-up website.
- 43.4 The law provides for penalties for failure to register, hiring unregistered contractors, misclassifying employees, and coercing others to form a business entity.

For additional information and to register go to www.dli.mn.gov/register or contact the Department of Labor and Industry at 651.284.5074 or email: dli.register@state.mn.us.

44. Non-Minnesota Contractors.

Minn. Stat. § 290.9705 requires public entities to deduct and withhold eight (8) percent of cumulative calendar year payments to Non-Minnesota Contractors which exceed \$50,000. The statute allows for an exemption of this requirement under specific circumstances that are listed in the "Reason for Exemption" section of the Exemption from Surety Deposits for Non-Minnesota Contractors Form (see link below). The Contractor must file a separate application for exemption for each contract.

In order to formalize this exemption you must, prior to being sent a Contract, complete this Form available at <https://www.revenue.state.mn.us/sites/default/files/2011-11/sde.pdf>, and submit to Minnesota Revenue. If approved, provide the ordering entity with a copy executed by Minnesota Revenue. The address to send the form for execution is:

Minnesota Revenue
Mail Section 5410
St. Paul, MN 55146-5410

45. Payment and Performance Bonds.

The Contractor must have the capability to provide a payment and performance bond per project (furnish equipment and installation) if a project is estimated to be **\$175,000.00** or greater per Minn. Statute 574.26.

The Contractor shall furnish the Performance Bond and a Labor and Material Bond (individually a "Bond" and collectively Bonds) to the public entity that has accepted a quote. The Performance Bond shall be in an amount equal to 100% of the full amount of the Order sum as security for the faithful performance of the Contract, and the Labor and Material Payment Bond shall be in an amount equal to 100% of the full amount of the Order sum as security for the payment of all persons performing labor and furnishing materials in connection with the Contract Documents. Such Bonds shall be on forms approved by or provided by the Owner and shall name the Owner as primary Obligee.

The surety issuing the Bonds shall be satisfactory to the Owner, be licensed to issue Bonds in the State of Minnesota, shall be rated by A.M. Best an A-(minus) or better, and shall be within the limit set by the Treasury Department as the net limit on any single risk for the surety, or if co-sureties are utilized, the amount of each Bond shall be within the total of such limits set for a surety and any such co-sureties. There shall be no affiliation between the Contractor and any bonding agencies or agent used.

In the event of change orders that result in an increase in the Contract or Order Sum, the penal sum of each Bond shall increase in the amount of such change in the Contract or Order sum without obtaining the surety's consent up to a maximum of 10% of the penal sum. Any aggregate increase in the excess of 10% of the original penal sum shall require the surety's written consent. The Contractor shall be responsible for getting the consent, and shall submit a copy of such consent to the Owner.

If the Owner determines that the surety providing the bonds no longer meets the requirements the Contractor shall obtain an adequate replacement surety that will provide acceptable bonds in the same form and amount as the bonds issued by the original surety. The Contractor shall pay the premium(s) on such new Bond(s). The Contractor acknowledges that further payments to the Contractor may not be made until the new surety has been qualified and approved.

46. Compliance with Tax Law Requirements.

46.1 The State cannot make final payment to the Contractor until the Contractor demonstrates that it and all its subcontractors have complied with the Income Tax withholding requirements of Minnesota Statutes, section 290.92 for wages paid for work performed under the contract. To establish compliance, the Contractor must submit a "Contractor Affidavit" either online or in paper form (IC134) to the Minnesota Department of Revenue. The Contractor will receive written certification of compliance when the Department of Revenue determines that all withholding tax returns have been filed and all withholding taxes attributable to the work performed on the contract have been paid. The Contractor must then provide this written certification to the Architect/Engineer to receive final payment.

46.2 Every subcontractor working on the Project must submit an approved "Contractor Affidavit" from the Minnesota Department of Revenue to the Contractor before the Contractor can file its own Contractor Affidavit. The Contractor is strongly encouraged to obtain the certification from each Contractor

immediately following the Subcontractor's completion of work on the project. Delays in completing the forms until after the project is complete may result in significant additional work for the Contractor in collecting the required forms.

46.3 The Department of Revenue, in association with the Department of Employment and Economic Development, offers a free seminar to help contractors understand tax law requirements. The Department strongly urges the Contractor and all subcontractors to attend the "Employment Taxes & Employer Responsibilities Seminar" or similarly offered classes. You can find a schedule and more information on the Department's website at: <https://www.revenue.state.mn.us/withholding-education-and-outreach>. Complying with this requirement is considered part of the work under this Contract. Contractor delay in complying with this requirement may cause the State to delay final payment and Contract Acceptance. The State may also report non-compliance to the Department of Revenue, which may result in enforcement action by the Department of Revenue.

47. Buying "Off" Contract/Purchase Order Limits.

The Contract does not prohibit state agencies from using their delegated purchasing authority to procure similar goods and services from other Contractors. At the State's discretion, the State's qualified personnel may do their own work even though it may be covered by the Contract. Individual Site-Specific Contracts issued against this Contract must not exceed \$2,000,000 including change orders for unforeseen conditions, unless approval is granted by the State's Authorized Representative. State requirements for \$2,000,000 or more must be solicited and contracted for through established public works construction contracting procedures.

48. Counties where there is no Contract Coverage.

Ordering entities that need work performed in a county that is not covered by a Contract are allowed to contact a Contractor who does have a Contract for a county that abuts the county where the work is to be performed. Under such circumstances, the Contractor may agree at their discretion to extend the Contract pricing, terms and conditions on an individual project basis.

49. Workmanship and Licenses.

Employ personnel skilled and experienced for the specific task required. Licensed journeymen shall be employed where required by law. Workmanship shall be of the highest quality and performed in a neat and expeditious manner. Qualified supervision shall be at the site when work is progressing.

All Contractors shall conform to the labor laws of the State of Minnesota and all other laws, ordinances, and legal requirements affecting their work in Minnesota.

50. Response Time.

A Site-Specific Contract will set forth the schedule for work and the procedure for requesting changes to the schedule. Once the project is started, work is to proceed on a continuous basis. Interruptions in finishing a project must be approved by the ordering entity.

All products must be installed with a minimum of interruption to the normal business operation. All work will comply with the applicable national, state and local codes and regulations. If normal service must be disrupted, the Contractor must consult with and obtain the approval of the ordering entity on how the service disruption will be handled prior to scheduling the work. Service Center assistance must be available 7 days a week, 24 hours a day. The Contractor must be able to provide first response to all service calls within one (1) hour. First response is defined as a returned phone call, or diagnostic and troubleshooting, and/or providing anticipated resolution.

51. Delivery, Storage and Handling.

The Contractor shall be responsible to inspect all components on delivery to ensure that no damage occurred during shipping or handling for furnish and installation projects. For equipment only purchases, the ordering entity shall be responsible to inspect all components on delivery. Materials must be stored in original undamaged packaging in such a manner to ensure proper ventilation and drainage, and to protect against damage, weather, vandalism, and theft until ready for installation.

52. Utilities.

Contractor shall protect above and below grade utilities in conformance with Minnesota Department of Transportation (MnDOT) Specification 1507 and shall contact Gopher One Call at 651-454-0002 / 800-252-1166 (website: www.gopherstateonecall.org) to locate on-site utilities. Contractor shall provide the ordering entity with the Gopher State One Call locates confirmation number.

53. Fire Safety Instruction for Contractors.

Contractors are required to adhere to all current codes, standards and safety rules that are in effect at the time of the work being performed. These include, but are not limited to, building codes, electrical codes, safety codes, and ordering entity's personnel/property protection codes. Contractors are responsible for obtaining the ordering entity's personnel/property protection requirements from the facility in which they are performing the work. Contractor will also implement a "hot-work" and/or "impairment" safety program during the performance of their work if applicable.

54. Right to Inspect and Require Work.

Any work performed that is not in conformance with the specifications of the Contract, or the legal requirements governing the work, shall be subject to rejection. All rejected work shall be immediately replaced or modified at the Contractor's expense so as to conform to the Contract. If the State determines that the work being performed by the Contractor is not in strict conformance with the Contract, the State shall have the right to order the work of the Contractor wholly or partially stopped, or suspended until any nonconforming work has been corrected. Such stoppage or suspension shall not invalidate or modify any terms of the Contract and no extra compensation or reimbursement will be allowed to the Contractor by reason of such stoppage or suspension.

55. Conduct.

All employees of the Contractor(s) shall conduct themselves in a professional and courteous manner at all times. Personnel deemed unacceptable by the State shall be replaced immediately. The State reserves the right to reject any employee.

56. Safety.

The ordering entity agrees to furnish safe and free access to all areas of work covered by this Contract for the purpose of executing the terms of this Contract. At its option, the ordering entity may request, and the Contractor will comply, that a member of the Contractor's staff be removed from working on projects for unsafe practices, violations of the Contract procedures, or other problems.

The Contractor shall take all reasonably necessary steps to provide for the safety of, and prevent damage, injury, or loss to:

- All persons
- The building and all other real or personal property at the work site.
- All equipment at the building, under the care, custody or control of the Contractor or any of its employees.

The Contractor shall promptly notify the ordering entity if, during the term of the Contract, the Contractor observes or otherwise learns of any conditions which:

- In the Contractor's judgment, poses a threat to the safety of person or property;
- Adversely affects the equipment; or
- Is in violation of any applicable codes or regulations.

57. Administrative Personnel Changes.

The Contractor must notify the State's Authorized Representative of changes in the Contractor's key administrative personnel, in advance and in writing. Any employee of the Contractor who, in the opinion of the State of Minnesota, is unacceptable, shall be removed from the project upon written notice to the Contractor. In the event that an

employee is removed pursuant to a written request from the State's Authorized Representative, the Contractor shall have 10 working days in which to fill the vacancy with an acceptable employee.

58. Damage.

At its expense, the Contractor shall promptly remedy and repair all damage or loss to any property caused by the Contractor. The Contractor shall not be liable for any loss, delay, injury, or damage, whether direct or consequential, that may be caused by conditions beyond its control relating to acts of government, strikes, lockouts, fire explosion, theft, riot, civil commotion, war, malicious mischief, floods, or other acts unforeseen, or other situations beyond the Contractor's control. The Contractor shall not be responsible for damage or loss attributable to the fault or negligence of the ordering entity. The Contractor shall not be held liable for back charges if the delay of response time is caused by strikes, any preference or priority allocation order issued by the government, or any unforeseeable cause beyond the Contractor's control, or any cause the State determines justifies the delay.

59. Hazardous Materials.

If hazardous materials are suspected or discovered during work operations, stop work and notify the ordering entity. Hazardous materials include, but are not limited to, asbestos containing materials, lead, PCB's, pollutants, contaminated soil, and mercury. Do not proceed with work until a written notice to continue work on the project is received by the ordering entity.

60. Delays.

The Contractor shall notify the ordering entity immediately of any prospective delays in the completion of the projects. Such notice shall be given in writing as soon as the contractor recognizes the prospect of delay. The ordering entity must approve all such requests.

61. Work Not Permitted or Work Requiring Ordering Entity Approval.

Repair work, new installations or extension of an existing system covered by this Contract does not extend to modification of building structural, mechanical, or electrical components, even though this work may be incidental to – and or necessary for – repair/modification unless approved in advance by ordering entity or already specified by the Contract.

62. Change Orders.

The Contractor can only proceed with work beyond the work authorized by a purchase order if the ordering entity has approved the change and a Change Orders is being issued. The ordering entity may authorize change orders in writing or verbally.

The ordering entity may require or the Contractor may make a written request (describing the nature of the proposed change) for certain changes in the scope of work described in a purchase order. If the ordering entity agrees to the changes and the costs for the changes, a Change Order will be issued. Change Orders will only be considered if they are based on materially different work conditions that could not have been expected from available information at the time the original purchase order was issued. Verbal authorizations for a Change Order must be followed up with a written Change Order as soon as possible.

63. Security.

Agencies will include their security requirements, if any, on each purchase order that they issue. Some Agencies require that the Contractor and its employees entering their facilities possess a current photo identification card or no entry will be allowed. Some secure facilities require that all vehicles entering and leaving the facility be searched. The Contractor and its employees shall note that introducing contraband upon the grounds of such secure facilities is a violation of State Law and could result in prosecution.

64. Removed Items and Clean-Up.

The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. Upon completion of the work, the Contractor shall remove and legally dispose of waste materials, rubbish, the Contractor's tools, equipment, machinery, and surplus materials from and

about the project premises and surrounding area daily. The cost of cleanup performed by the ordering entity as a result of the Contractor's failure to provide the cleanup required by this solicitation shall be deducted at the actual cost to the State from the Contract sum.

When removal and disposal of non-hazardous debris is performed on a job site, receipt for disposal and manifest documentation must be included with the final invoice.

65. Submittals.

Contractor must submit all documents as required by the contract. Documents required to be submitted include, but are not limited to:

- Minnesota Department of Revenue online "Contractor Affidavit" form or paper IC134 form as required by the Compliance with Tax Laws Requirement clause in Exhibit A of the Contract. Email the State of Minnesota Prevailing Wage Payroll Report and Statement of Compliance form as required by the Contract to the address listed on the purchase order.

Exhibit B: Insurance Requirements

The Contractor shall maintain insurance to cover claims which may arise from operations under this Contract, whether such operations are by the Contractor, their Subcontractor, or by anyone directly or indirectly employed under this Contract. A Contractor may defer providing proof of insurance until it has been offered a Site-Specific Contract; an unreasonable delay by Contractor in providing acceptable proof of insurance may be grounds for the Site-Specific Contract to be awarded to another Contractor who has provided acceptable proof of insurance.

The Contractor shall not commence work under the Contract until they have obtained all the insurance described below and the State of Minnesota has approved such insurance. The Contractor, under this Contract, can provide applicable services to the State of Minnesota and/or CPV members, hereinafter referred to as Owner.

All policies shall remain in force and effect throughout the term of the Contract.

REQUIREMENTS FOR THE CONTRACTOR:

The Contractor's policy(ies) shall be primary and non-contributory insurance to any other valid and collectible insurance available to the state of Minnesota with respect to any claim arising out of this Contract.

The Contractor is responsible for payment of Contract related insurance premiums and deductibles.

Insurance companies must either (1) have an AM Best rating of A- (minus) and a Financial Size Category of VII or better, and be authorized to do business in the State of Minnesota or (2) be domiciled in the State of Minnesota and have a Certificate of Authority/Compliance from the MN Department of Commerce if they are not rated by AM Best.

Certificates of Insurance acceptable to the State of Minnesota shall be submitted prior to commencement of the work under this contract. If Contractor receives a cancellation notice from an insurance carrier affording coverage herein, Contractor agrees to notify the State of Minnesota within five (5) business days with a copy of the cancellation notice, unless Contractor's policy(ies) contain a provision that coverage afforded under the policy(ies) will not be cancelled without at least thirty (30) days advance written notice to the State of Minnesota.

NOTICE TO THE CONTRACTOR:

The failure of the State of Minnesota to obtain Certificate(s) of Insurance, for the policies or renewals thereof or failure of the insurance company to notify the State of the cancellation of policies required under this Contract shall not constitute a waiver by the Owner to the Contractor to provide such insurance.

The Owner will reserve the right to immediately terminate the Contract if the Contractor is not in compliance with the insurance requirements, and the Owner retains all rights to pursue any legal remedies against the Contractor. In the event of a claims dispute, all insurance policies must be open to inspection by the state, and copies of policies must be submitted to state's authorized agent upon written request.

The insurance and insurance limits required herein shall not be deemed as a limitation on the Contractor's liability with regard to the indemnities granted to the Owner under the contract.

NOTICE TO INSURER:

The Contractor's insurance company waives its right to assert the immunity of the State as a defense to any claims made under said insurance. Contractor's insurance company is notified that the liability of their policyholder is not limited by statute, and as a result, they are precluded from limiting claim payments based on any assumption that they are protected by immunity of the State.

Coverage under the General Liability policy(ies) of the Contractor will be as broadly construed for the Owner as is available to the Contractor.

The liability limits specified by the contract are the minimum limits required, and any and all additional limits provided to the Contractor will be available on an excess, umbrella or other basis, to the Additional Insured for any and all covered claims.

POLICY REQUIREMENTS:

1. Workers' Compensation Insurance:

1.1 Contractor shall provide workers' compensation insurance for all employees and shall require any Subcontractor to provide workers' compensation insurance in accordance with the statutory requirements of the State of Minnesota and must include:

1.1.1 Part 2, Employers Liability including Stop Gap Liability for monopolistic states, at limits of not less than:

\$100,000 – Bodily Injury by disease per employee

\$500,000 – Bodily Injury by disease aggregate

\$100,000 – Bodily Injury by accident

1.1.2 Coverage C: All States Coverage

- If applicable, USL&H, Maritime, Voluntary and Foreign Coverage.
- A waiver of subrogation in favor of the State of Minnesota, as Owner.

If Contractor is self-insured for its obligation under the Workers' Compensation Statutes in the jurisdiction where the project is located, a Certification of the Authority to Self-Insure such obligations shall be provided.

Evidence of Subcontractor insurance shall be filed with the Contractor.

1.2 Statutory Compensation Coverage. If Minn. Stat. § 176.041 exempts the Contractor from Workers' Compensation insurance or if the Contractor has no employees in the State of Minnesota, the Contractor must provide a written statement, signed by the authorized signer of the Contract, stating the qualifying exemption that excluded the Contractor from MN Workers' Compensation requirements.

If, during the course of the Contract, the Contractor becomes eligible for Workers' Compensation, the Contractor must comply with the Workers' Compensation Insurance requirements included herein and provide the State of Minnesota with a certificate of insurance.

2. Automobile Liability Insurance:

The Contractor shall maintain insurance to cover liability arising out of the operations, use, or maintenance of all owned, non-owned, and hired automobiles.

2.1 Minimum Limits of Liability:

\$2,000,000 - Per Occurrence combined Single Limit Bodily Injury and Property Damage

2.2 Coverages:

- Owned Automobile
- Non-owned Automobile

- Hired Automobile
- Waiver of subrogation in favor of the State of Minnesota

3. Commercial General Liability:

The Contractor shall maintain insurance to cover claims arising from operations under this Contract, whether such claims are by the Contractor, Subcontractor, Sub-Subcontractor or by anyone directly or indirectly employed under this Contract.

3.1 Minimum Limits of Liability:

\$2,000,000 - Per Occurrence

\$2,000,000 - Annual Aggregate

\$2,000,000 - Annual Aggregate applying to Products and Completed Operations

\$50,000 - Fire Damage (any one fire)

\$5,000 - Medical Expense (any one person per occurrence)

3.2 Coverages

- Premises and Operations Bodily Injury and Property Damage
- Personal Injury & Advertising Injury
- Products and Completed Operations Liability
- Contractual Liability as provided in ISO form CG 00 01 04 13 or its equivalent.
- Pollution exclusion with standard exception as per Insurance Services Office
- (ISO) Commercial General Liability Coverage Form – CG 00 01 04 13 or equivalent
- Independent Contractors – Let or Sublet work
- Waiver of Subrogation in favor of the State of Minnesota
- Officers and Employees of the State of Minnesota shall be named as Additional Insureds, to the extent permitted by law, for claims arising out of the Contractor's negligence or the negligence of those for whom the Contractor is responsible for both ongoing and completed operations.

Contractor agrees its coverage will not contain any restrictive endorsement(s) excluding or limiting Broad Form Property Damage (BFPD) or Explosion, Collapse, Underground (XCU).

4. UMBRELLA OR EXCESS LIABILITY

An Umbrella or Excess Liability insurance policy may be used to supplement the Contractor's policy limit to satisfy the full policy limits required by the Contract.

Officers and Employees of the State of Minnesota shall be named as Additional Insureds, to the extent permitted by law, for claims arising out of the Contractor's negligence or the negligence of those for whom the Contractor is responsible for both ongoing and completed operations.

5. BUILDER'S RISK INSURANCE

The Contractor must have the ability to provide Builder's Risk Insurance.

CPV Members must consult with their Risk Management Department to determine if Builder's Risk is to be required. If required, the CPV Member is responsible for informing the Contractor that the cost of the Builder's Risk insurance is to be included in their quotation. State Agencies: Builder's Risk is waived for projects less than \$50,000.

For projects that are \$50,000 and greater, the Contractor is required to provide Builder's Risk. State agencies are responsible for informing the Contractor that the cost of the Builder's Risk insurance is to be included in their quotation. State agencies must collect the Builder's Risk Certificate of Insurance prior to issuing the purchase order for the Site-Specific Contract.

6. BUILDER'S RISK – BY CONTRACTOR

The Contractor shall be responsible for providing and maintaining "All Risk" or equivalent Builder's Risk policy insuring the interest of the Owner, Contractor, and any tier of Subcontractor. Coverage on an "All Risk" or equivalent basis shall include the perils of flood, earthquake and pollution cleanup expense. Builder's Risk limit of liability shall be equal to the amount of the contract. Any deductible shall be the sole responsibility of the Contractor and shall not exceed \$10,000 without the written approval of the Owner.

- 6.1 The Contractor shall be responsible for providing and maintaining "All Risk" or equivalent Builder's Risk policy insuring the interest of the Owner, Contractor, and any tier of Subcontractor. Coverage on an "All Risk" or equivalent basis shall include the perils of flood, earthquake and pollution cleanup expense. Builder's Risk limit of liability shall be equal to the amount of the contract. Any deductible shall be the sole responsibility of the Contractor and shall not exceed \$10,000 without the written approval of the Owner.
- 6.2 Any property not covered by the Builder's Risk policy, such as the Contractor's or any tier of Subcontractor's licensed motor vehicles or personal property, including job trailers, machinery, tools, equipment and property of a similar nature not destined to become a part of the project, shall be the responsibility of the Contractor or Subcontractor at any tier, and such person or organization may self insure or provide other insurance at its option for the same. The Contractor shall be responsible for providing and maintaining "All Risk" or equivalent Builder's Risk policy insuring the interest of the Owner, Contractor, and any tier of Subcontractor. Coverage on an "A."
- 6.3 Waiver of Liability: Absent Owner or Architect sole negligence or breach of specific Contractual duty specifically and logically related to the damage or loss, the Owner or Architect will not be responsible for loss or damage to property of any kind owned, borrowed, rented or leased by the Contractor, Subcontractors of all tiers and/or the Contractor's/Subcontractors employees, servants or agents.
- 6.4 Waivers of Subrogation: The Owner and Contractor waive all rights against (1) each other and any of their Subcontractors of all tiers and (2) the Architect, and the Architect's Subcontractors of all tiers for damages caused by fire or other causes of loss to the extent covered by property insurance obtained pursuant to the provisions of this section or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner or Contractor as fiduciary. The Owner or Contractor, as appropriate, shall require of the Architect, and the Architect's Subcontractors of all tiers, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.
- 6.5 All losses and claims shall be immediately reported to the Contractor, Owner and applicable insurance carrier, under loss notice procedures as directed by the Contractor.
- 6.6 Any loss insured under this section is to be adjusted with the Contractor and made payable to the Contractor as trustee for all insured parties, as their interests may appear, subject to the requirements of any applicable mortgage clause. The Contractor shall pay the Owner a just share of any insurance moneys received, and by appropriate agreement, written where legally required for validity, shall require the Contractor to make just share payments to the Subcontractors and lower tiered Sub-Subcontractors in similar manner.
- 6.7 Partial occupancy or use shall not commence until the insurance company or companies providing property insurance have consented to such partial occupancy or use by endorsement or otherwise.

6.8 Loss of Use Insurance. The Owner, at the Owner's option, may purchase and maintain such insurance as will insure the Owner against loss of use of the Owner's property due to fire or other hazards, however caused.

Any deductible will be the sole responsibility of the Contractor and may not exceed \$50,000 without the written approval of the State. If the Contractor desires authority from the State to have a deductible in a higher amount, the Contractor shall so request in writing, specifying the amount of the desired deductible and providing financial documentation by submitting the most current audited financial statements so that the State can ascertain the ability of the Contractor to cover the deductible from its own resources.

The retroactive or prior acts date of such coverage shall not be after the effective date of this Contract and Contractor shall maintain such insurance for a period of at least three (3) years, following completion of the work. If such insurance is discontinued, extended reporting period coverage must be obtained by Contractor to fulfill this requirement.

Exhibit C: Specifications, Duties, and Scope of Work

In the performance of work under this Master Contract and any Site-Specific Contracts under this Master Contract, the following specifications and requirements apply.

General Specifications

- A. The proposed and designed solar systems must be in compliance with all laws, ordinances, and codes.
- B. Detailed design work must be completed by qualified personnel who are licensed in the state of Minnesota:
 - a) Electrical one-line diagrams must be approved and stamped by a licensed electrical engineer;
 - b) Roof mount installations must be assessed by approved and stamped by a licensed structural engineer;
 - c) All ground mount installation designs must be approved and stamped by a licensed civil engineer.
 - d) All solar canopy or carport designs must be approved and stamped by a licensed structural engineer.
- C. The system must be rated for local, Minnesotan weather conditions.
- D. The Contractor must secure all permits and approvals from governing agencies.
- E. For the purposes of this master contract and all work orders executed under it, the definition of a "Photovoltaic (PV system" or "solar system" or "solar PV system" or "solar energy system" or "complete solar PV system", in addition to other Specifications listed in this document, shall be defined, but not limited to, the following:

"A photovoltaic (PV) system is a system composed of one or more solar panels organized into arrays, combined with DC to AC inverter(s) and other electrical and mechanical hardware that use energy from the sun to generate useable AC electricity. The PV system includes all components and hardware needed operate the PV system in adherence to all applicable codes, ordinances, regulations, and utility requirements. The PV system includes all mechanical hardware needed to structurally secure the array(s) to any surface indicated in the site-specific RFP. For ground mount PV systems, the PV system includes any necessary civil engineering work/materials to properly account for frost heave, local soil conditions, and other environmental factors (e.g., grading, class 5, ballasts, footings, piles). The PV System includes monitoring and metering technology with communication protocols compatible with the Owner's IT system(s) and energy data database of choice; the metering technology must be able to transmit at least 15-minute interval data reporting at least real power (W), apparent power (VA), reactive power (VAR), voltage (V), and current (A), for each inverter."

1. Specifications for Flat (low sloped) Rooftop Mounted Installations:

- A. The system should be sized with a 7-foot setback (distance from the array exterior to the roofing parapet or roofing perimeter. The soliciting entity reserves the right to modify the required setback in project level solicitations within compliance of all laws, ordinances, and applicable codes. The Contractor must not propose or design a system that violates local setback requirements or federal OSHA regulations.
- B. Mounting system shall limit roof penetrations and shall be either building integrated roof PV or fully ballasted. Mounting system design needs to meet applicable local building code requirements with respect to snow, wind, and storm water runoff. Conduit penetrations shall be minimized.
- C. If system is not building integrated or membrane sealed, system shall be fixed tilt at 10 degrees with a 180-degree azimuth.
- D. System layout shall meet local fire department, code and ordinance requirements for roof access.
- E. All roof access points shall be securely locked at the end of each day of construction.
- F. The Contractor must work with the Owner to adhere to roofing warranty clauses.

2. Specifications for Ground Mounted Installations:

- A. Mounting system shall be either directly anchored into the ground (driven piers, concrete footers, etc.) or ballasted on the surface without ground penetration. Mounting system design needs to meet applicable local building code requirements with respect to snow, wind, and earthquake factors.

- B. The Contractor shall be responsible for all and any landscaping work (grading, brush removal etc...) or civil engineering work needed to install the ground mount installation.
- C. Mounting systems must account for frost heaves; measures taken to mitigate frost heaving must be documented clearly in all engineering design sets.
- D. Footings and foundation designs must indicate references to geotechnical analyses (if they have been conducted by the soliciting agency) or to the applicable state building code. They must indicate design for frost action and indicate soil bearing design value.
- E. All ground mount installation designs must be stamped by licensed civil engineer.
- F. Mounting systems must undergo live load calculations: wind load, including uplift calculations, snow loads, and must be stamped by a licensed engineer.
- G. Panels' orientation or azimuth shall be within 20-30 degrees of due south, unless explicitly requested by the soliciting entity.
- H. Unless specified in the project level solicitation, the Contractor will be responsible for preparing the site for construction. Preparing the site for construction includes the removal of any brush and flora, grading, laying of gravel or class five, or any other grounds work that must be undertaken to design and build a functioning PV system.
- I. Unless specified by the purchasing entity, the Contractor is responsible for returning the construction site and any grounds disturbed as a result of the project construction to its original condition, including landscaping (seed planting, grass plantings). See also Paragraph L in this section.
- J. Panels' tilt shall be based on site latitude and wind conditions typical to project area. Tilt shall be designed to maximize energy production and shall adhere to the racking manufacturers' recommendations.
- K. The contractor shall be responsible for restoring all disturbed ground outside of the array fencing perimeter to its original state, unless specified by the soliciting entity in its site-specific RFP.
- L. Disturbed areas within the perimeter of the solar array's fencing must be planted with pollinator friendly plantings, unless specified by the soliciting entity in its site-specific RFP. Plantings and methods shall follow the Minnesota Board of Water & Soil Resources guidelines: [Native Vegetation Establishment and Enhancement Guidelines \(pdf\)](#).
- M. Storm water management and erosion control management plan shall be included in the proposal.
- N. Fencing and gate shall be included in the proposal.
- O. All lines interconnecting PV arrays to point of interconnection shall be underground.

3. Specifications for Pitched-roof Installations:

- A. The Contractor must provide site-specific mechanical, structural, and electrical engineering screenings to determine the optimal pitch roof configuration.
- B. Pitched roof PV arrays should preferably be flush mounted.
- C. For standing seam metal roofs, S-5 clips should be attached to the raised seam. Additional penetrations must be avoided.
- D. For composite asphalt shingle roofs, stand-off brackets should be bolted to structural members. Otherwise, retrofit mounting systems can be secured directly to the roof surface. All roof penetrations must be properly sealed.
- E. For all types of pitched roofing installations, the Contractor must work with the Owner to adhere to roofing warranty clauses.
- F. System layout shall meet local fire department, code and ordinance requirements for roof access.
- G. All roof access points shall be securely locked at the end of each day of construction.

4. Calculations

- A. The Contractor shall provide a breakdown of their estimated system losses:
 - a. Soiling (%)
 - b. Shading (%)
 - c. Snow (%)
 - d. Mismatch (%)
 - e. Wiring (%)

- f. Connections (%)
 - g. Light-Induced Degradation (%)
 - h. Name Plate Rating (%)
 - i. Age (%)
 - j. Availability (i.e., reductions in the system output caused by scheduled and unscheduled system shutdowns) (%)
- B. System Electrical Calculations. Provide with design development and again with 100% check set.
- C. System Advisory Model (SAM, sam.nrel.gov) or PVsyst simulations using proposed specific PV modules and inverters. The Contractor shall submit energy system modelling results for the specified installations. Other modeling software may be acceptable at the discretion of the ordering entity.

5. Technical Requirements and Reference Materials

- A. Code Compliance. Installation and equipment shall comply with applicable building, mechanical, fire, seismic, structural and electrical codes. Only products that are listed, tested, identified, or labeled by UL, FM, ETL, or another Nationally Recognized Testing Laboratory shall be used as components. Non-listed products are only permitted for use as project components when a comparable useable listed component does not exist. Non-listed products proposed for use as components must be identified as such in all submittals.
- B. At the time of any project level work order execution, the Contractor shall use solar PV system components that are readily reusable or recyclable. Contractor shall track solar system equipment that ceases to function as intended and report on an annual basis the recycling of any modules or inverters provided under this contract or its warranty (counts of module type and inverter model), to the Minnesota Pollution Control Agency (MPCA). The Module or inverter recycling reporting form is attached as Exhibit F.
- C. The publications listed below form a part of this document and are hereby incorporated by reference:
- a. National Electrical Code (NEC)
 - b. UL 1703 Flat – Plate PV Modules and Panels
 - c. UL 1741 – Standard for Static Inverters and Charge Controllers for Use in Photovoltaic Power Systems
 - d. FM Approved – Fire Protection Tests for Solar Component Products
 - e. IEC 62446 Grid Connected Photovoltaic Systems- Minimum Requirements for System Documentation, Commissioning Tests, and Inspections
- D. Other technical codes that shall apply include:
- a. ASME PTC 50 (solar PV performance)
 - b. ANSI Z21.83 (solar PV performance and safety)
 - c. NFPA 853 (solar PV systems near buildings)
 - d. IEEE 1547 (interconnection standard)
 - e. ASCE/ SEI-7 – American Society of Civil Engineers – “Minimum Design Loads for Buildings and Other Structures”.
 - f. NRCA – National Roofing Contractors Association

6. Production Metering and Monitoring

- A. Projects shall include one production meter at each point of interconnection (POI).
- B. Metering shall include automated energy metering with TCP-IP stack allowing HTTP, SMTP, DHCP, FTP, and ARP for easy interconnection to the Owner’s Information Technology (IT) systems.
- C. The Owner will manage and have access to all data. The Contractor shall contact the Owner’s IT department to ensure the metering device can easily transfer data to the Owner’s current operating data infrastructure. The Owner requests an AMR system that logs data in 15-minute averages. All monitoring hardware and monitoring equipment shall be provided by the Contractor.
- D. Meters utilized for the project shall be UL listed, and shall comply with the utility(s)’s net energy metering requirements.
- E. Meters shall be installed in the main distribution panel (MDP) when possible. Meters shall not be mounted to the transformer housing without prior approval.

7. Utility Interconnection Agreement

- A. The Contractor shall be responsible to ensure that the project satisfies all utility criteria for interconnection of the project to the specified utility service area's electric distribution system. This includes coordinating all negotiations, paying any interconnection fees, meeting with the Utility, design reviews, and participating in any needed interaction between the Utility and the Owner. The Contractor shall be responsible for all costs associated with the interconnection process that can be determined at the time of the Contractor's response to a sitespecific solicitation and these costs will be a part of the Contractor's quote.
- B. The Contractor is responsible for preparing required submissions for obtaining the Net Energy Metering (NEM) and interconnection agreement from the utility. The Owner will sign the NEM and interconnection agreements, not the contractor.
- C. The Contractor shall manage interconnection and startup of project in coordination with the Site and the utility(ies). The Contractor shall at its own expense pay any interconnection, processing, and other fees and expenses as may be required by the Utility for interconnection and operation of the project.

8. Specifications for PV Modules

- A. PV modules shall be a commercial off-the-shelf product, shall be UL listed, and shall be on the California Senate Bill 1 (SB1) List of Eligible SB1 Guidelines Compliant Photovoltaic Modules to be eligible for Construction Specifications Institute (CSI), and shall be properly installed according to manufacturer's instructions, NEC, and as specified herein. Recycling guidelines for PV modules, inverters and other accessories may be included in a site-specific RFP.
- B. All modules chosen must have a PVUSA Test Condition (PTC) rating of 204 or greater and a current, $I_{pmax,low}$, under low irradiance, of 1.55 amp or greater.
- C. All modules installed in a series string shall be installed in the same plane/orientation
- D. PV array shall mean one or more PV modules having that same orientation and on the same maximum power point tracking (MPPT) system. Every array with differing orientation shall have a separate MPPT system. All PV hardware components shall be either stainless steel or aluminum. PV structural components shall be corrosion resistant and reusable or recyclable (galvanized steel, stainless steel, or aluminum).
- E. The projects, including supports and power conductors, shall not interfere with roof drains, water drainage, expansion joints, air intakes, existing electrical and mechanical equipment, existing antennas, and planned areas for future installation of equipment shown on drawings provided by the Owner.
- F. Power provided shall be either 208V, 480V or 13.8 kV three phase compatible with the onsite distribution system.
- G. The PV modules shall be installed such that the maximum amount of sunlight available year-round on a daily basis should not be obstructed. At a minimum, all PV arrays shall be shade free from 9 a.m. until 3 p.m. (solar time). All projects must include documentation of the impact from any obstruction on the seasonal or annual performance of the solar electric array.
- H. System wiring shall be installed in accordance with the provisions of the NEC.
- I. All modules installed in a series string shall be installed in the same plane/orientation.
- J. Warranty. No module will generate less than 95% of its specified minimum power when purchased. PV modules shall have a 25-year limited warranty that modules will generate no less than 80% of rated output under STC. PV modules that do not satisfy this warranty condition shall be replaced at no cost to the Owner. Measurement made under actual installation and temperature will be normalized to standard test conditions using the temperature and coefficients published in the module specifications. The entire system must have a 10-year warranty covering all components and system operability. The Contractor is responsible for disposal and recycling of components that are replaced under warranty. The Contractor shall be responsible for annually reporting by March 1 for the previous calendar year, the recycling of any modules or inverters provided under this contract or its warranty (counts of module type and inverter model), to the Minnesota Pollution Control Agency. Contractor may be required to obtain a performance bond before final approval of a site-specific contract; when required, the requirement will appear with a site-specific RFP. The State reserves the right to cancel an award or award to another responder if the prospective Contractor does not obtain its required site-specific performance bond within a reasonable time.

- K. Panel installation design shall allow for the best ventilation possible of panels to avoid adverse performance impacts.
- L. While engaged in a power purchase agreement (or third party ownership model) contract, the contractor shall be responsible for recycling any of the solar system equipment that ceases to function as intended, for any reason.
- M. The Contractor shall provide the Owner with 1% additional PV panels (in case of replacement).

9. Specifications for Inverter Selection

- A. The Contractor may propose various inversion technologies (i.e., micro-inverters, string inverters, modules with optimizers) for projects, given the technologies comply to the following specifications:
 - a. UL/ETL listed
 - b. Considering new distributed energy resource standards (DER), all inverters proposed need to have “smart inverter capabilities” allowing for IEC 61850 communication and should be capable of performing the seven autonomous grid support functions (i.e., State of California’s Electric Tariff Rule 21), and must be compatible to operate under IEEE 1547-2018 standards.
 - c. The inverter and modules must not be co-dependent. In other words, the inverters must not be technologies dependent on one sole module manufacturer and the modules must be operable with more than one inverter make and model. The balance of system and all monitoring devices must be able to operate with inverters of different manufacturers.
 - d. The inverter must be installed in shade and not under direct sunlight. The inverter must be protected from rain.
 - e. Inverters must have a peak efficiency rating of 96% or higher.
 - f. Power provided must be compatible with onsite electric distribution systems.
 - g. Install inverters and control panels in most optimum locations with appropriate environmental protection. Roofs may be used if structurally sufficient. If inverters are mounted outside they must be shaded from direct sun from 10 a.m. to 6 p.m. in the months of June to August and be able to be secured.
 - h. Operating and shut down instructions shall be posted on or near the system, and on file with facilities operation and maintenance documents.
 - i. The inverter shall have operational indicators of performance and have built-in data acquisition and remote monitoring.
 - j. The inverter must be capable of parallel operation with the existing AC power. Each inverter must automatically synchronize its output waveform with that of the utility upon restoration of utility power.
 - k. The inverter and system must utilize an astronomical timer or other means to shut down the inverter during night time to avoid energy usage at night.
 - l. Warranty. At least a 10-year manufacturers’ warranty must be provided for each inverter. The Contractor shall be responsible for recycling any inverters replaced under warranty.
 - m. The Contractor shall be responsible for annually reporting by March 1 for the previous calendar year, the recycling of modules and inverters provided under this contract or its warranty (counts of module type and inverter model), to the Minnesota Pollution Control Agency.

10. Installation

- A. Work includes furnishing and installation of a complete and power producing solar system, either behind the meter, connected for net metering, or stand-alone, in compliance with electric provider requirements.
- B. The State will perform or provide soil testing at the proposed site before any work or development by Contractor. The State will provide results and documentation to the Contractor.
- C. Electrical work must be performed by a licensed electrician in accordance with Minn. Stat. § 326B.33. The Contractor must be licensed by the North America Board of Certified Energy Practitioners (NABCEP) for installation of the equipment, including PV installation professional certification.
- D. The Contractor must provide all structural mounting equipment and install to match the panel configuration recommended by the panel manufacturer.

- E. The Contractor must conduct acceptance testing by starting the equipment and ensuring it achieves the performance requirements as specified in the system design. Performance testing must be conducted over a 24- hour period. These requirements are in addition to any other right of the Owner to inspect or accept the Equipment. Follow-up performance testing is to be conducted at approximately three months and one year from start-up. The vendor will provide IV-Tracing results as baseline measurements.
- F. Areas where wiring passes through ceilings, walls or other areas of the building shall be properly restored, booted, sealed and returned to their original condition.
- G. All wiring between carports and the point of interconnection shall be underground and meet applicable codes.
- H. Thermal insulation in areas where wiring is installed shall be replaced to “as found or better condition.” Access doors to these areas shall be properly sealed and gasketed.
- I. All field electrical devices shall have the capability to be locked as appropriate.
- J. Lightning Protection. The Contractor must provide surge protection on all electrical systems.
- K. Copies of all warranties must be provided to the Owner.
- L. The Contractor must provide three sets of as-built drawings, including one on CAD.

11. Maintenance

- A. The Contractor shall operate and maintain the PV system for project year 1 of operation and provide operating cost quotes. The Contractor is able to bid for continued operation and maintenance after project year 1 of operation.
- B. The Contractor must be able to recommend an appropriate schedule for maintenance of the system.
- C. The Contractor must provide operation, maintenance, and parts manuals for the equipment. The manual must cover all components, options, and accessories supplied; and the manual must include warranty, maintenance, trouble-shooting, and safety precautions specific to the supplied equipment.
- D. While engaged in an operations and maintenance contract, the contractor shall be responsible for recycling any of the solar system equipment that ceases to function as intended, for any reason. The Contractor shall be responsible for annually reporting by March 1 for the previous calendar year, the recycling of any modules or inverters provided under the contract (counts of module type and inverter model), to the Minnesota Pollution Control Agency.
- E. Recorded maintenance training for the Owner’s staff must be provided.

12. Specifications for Power Purchase Agreements (PPAs)

- A. The state entertains financing proposals from contractors in the form of power purchase agreements.
- B. PPAs are evaluated on the “levelized cost of energy” calculation from the price sheet “Solar_Master_Attachment_C-3__Finance.xlsx”; the “levelized cost of energy” measured on a \$/kWh basis will be interpreted as the ceiling price. This formula shall be consistent in project level evaluations as to evaluate PPA offerings and to ensure the levelized cost per kWh are reasonably consistent with the master contract cost.
- C. The financing proposal, including the PPA must adhere to all terms, specifications, and conditions in the Master Contract, which may be referred to as S-1049(5). The PPA contract shall not conflict with the Master Contract.

DESIGN SERVICES POST AWARD

Solar PV systems shall be designed and engineered to maximize the solar energy resources, taking into consideration the customer’s electrical demand and load patterns, proposed installation site, available solar resources, existing site conditions, proposed future site improvements, and other relevant factors.

Design Services shall require a schematic design submission, a design development submission, a check set submission and a construction document submission. A final set of as-built drawings shall also be provided to the Owner. These submissions shall be delivered to the Owner based on the project schedule submitted and approved by the Owner. The design package shall include the following enumerated details.

- 1. Timeline/Project Schedule.** Contractor is required to provide an estimate on project timeline and schedule.
- 2. Project Award Conference.** Within 21 calendar days after receipt of a project award. The meeting will be attended by the State team members and the contractor's personnel. At a minimum, the prime contractor's project manager and foreman, the primary designer, and a representative of any subcontractor performing over 25% of the work must attend. The meeting will be held at the project location. The purpose of the meeting will be to discuss the contractor's plan for completing the design and construction, including a construction schedule. A walk-through of the site will occur at the end of the meeting.
- 3. All drawings, estimates, calculations, and specifications shall be in English units.**
- 4. All designs and construction drawings must be approved by the purchasing entity. Written approval must be given before materials (capital expenditures) are procured.**
- 5. The Contractor shall take into account a construction plan producing a minimum disruption of day-to-day activities, utilities, services, etc.**
- 6. Equipment Information – Submit with Project-Level Quotes**
 - a. System description
 - b. Layout of installation
 - c. Selection of key equipment and layout of equipment
 - d. Performance of equipment components, and subsystems with accompanying reports
 - e. Specifications for equipment procurement and installation
 - f. All engineering associated with structural and mounting details
 - g. Controls, monitors, and instrumentation
 - h. Operation and maintenance service plan for year 1 of project operation. Contractor is welcome to submit servicing bid for subsequent project years.
- 7. Installation Interconnection Information – Submit with Project Quotes**
 - a. Solar electric array orientation (degrees)
 - b. Solar electric module tilt (degrees)
 - c. Electrical grid interconnection requirements
 - d. Integration of solar PV system with other power sources
 - e. System type and mode of operation (utility interactive)
 - f. Engineering screening process with Minnesota Public Utilities Commission
- 8. Performance Estimation Calculation – Submit with Project Quotes**
 - a. Proposal shall provide final estimated energy delivery results for each array, for each month of the year and total for the year at the delivered voltage (208V, 480V, or 13.8 kV).
 - b. Contractor shall submit these site-specific simulation results, (e.g., PVSyst report) to the Owner, after the Project Award Conference.
- 9. Construction Design and Drawings**
 - a. The Contractor must provide drawings for each discipline required (architectural, structural, electrical, etc.), with separate plans for new work and demolition as well as special types of drawings where necessary, such as enlarged plans, equipment curbing and flashing details, roof penetration details etc. Drawings shall clearly distinguish between new and existing work.
 - b. Each drawing shall indicate project title, project number, array identification and location, A/E firm, A/E's address and/or phone number, contract number, drawing title, drawing type, drawing number, and key plan. A cover sheet shall be provided and shall include a list of the drawings, legend, vicinity map, and location map in addition to all items required for each drawing. Each A/E submission shall be clearly dated and labeled (e.g. 75% Design Development Submission, 100%

Check Set Submission, Construction Document Submission, As-Built Drawings, etc.). Each drawing sheet submitted shall include a graphic scale in the lower right-hand portion of the sheet. The final set shall be stamped by a registered engineer and/or registered architect for the state in which the building/carport is located. At a minimum, the following drawings are required:

- i. Site plan including utility locations and connections – shall show staging and phasing requirements.
 - ii. Electrical plans – including single line diagram and utility interconnection.
 - iii. Electrical details.
 - iv. Roof plan, if applicable – showing the full layout of the system and detailing any obstacles that must be permanently or temporarily removed or relocated.
 - v. Array support and mounting details, including cross-sections of how the array will be mounted to any supports, ballasts, or piles.
 - vi. Structural loading calculations. For roof and ground mount installations, live and dead loads must be assessed. Rooftop installation designs must be approved and stamped by a licensed structural engineer.
 - vii. Water proofing details
 - viii. Snow removal details and practices including relevant bollard placement and equipment marketers/flags accounting for potential snow drifting.
 - ix. Any drawings that may be required to install a complete project.
- c. Specifically address the means to keep the existing building accessible and operational by means of relocation and / or phasing.
- d. For all ground mount installations, the drawings must account for cyclical frost heave. The construction drawings must clearly indicate and prove how the proposed design will endure freeze and thaw cycles common in Minnesota.
- e. The State, at its discretion, may reject a slab-on-grade ground mounted design. The Contractor may only continue engineering a slab-on-grade design with the consent of the State.
- f. All ground mount foundations and footings must be approved by the ordering entity, and the design must indicate requirements for soil corrections under slab: 1) depth of removal of soils, 2) extent and specifications of compacted base course and subgrade, 3) extent and specifications of drainage layer if required.
- i. Concrete requirements:
 1. Perform work in accordance with ACI 301-05 and ACI 310-05.
 2. Provide a $\frac{3}{4}$ " chamfer on all exposed concrete corners.
 3. Provide supports and spacers for all reinforcing.
 4. Consolidate all concrete by vibrating.
 5. All concrete shown shall be reinforced.
 6. Provide reinforcing steel grade and ASTM standards required.
 7. Provide chart for lap splice lengths.
 8. Indicate minimum concrete cover for reinforcement.
 9. Mix designs shall incorporate admixtures as appropriate for environmental conditions.
 10. All reinforcing shall be detailed, fabricated & placed in accordance with CRSI "MANUAL OF STANDARD PRACTICE".
 11. Submit description of planned protective measures for hot or cold weather concreting hot and cold weather concreting shall be done in accordance with ACI 305R and 306R respectively
 12. Fiber reinforcement used in concrete shall be BASF Master Fiber or equivalent. The amount to be mixed in concrete is 3LB/CU.YD
 13. Formed concrete surfaces shall be smooth form finish. Exposed surfaces to be broom finished.
 14. Indicate saw cut control joint pattern and depth.
 15. Coordinate grounding requirements between foundation construction and electrical work.

10. Conditional Use Permitting

The Contractor shall coordinate with the Owner to secure Conditional Use Permitting from local and regional jurisdictions. The Contractor shall be responsible for preparing conditional use permitting materials and for paying for conditional use permitting fees, if applicable.

Exhibit D: Pricing

1. Contract Pricing.

Contract prices must take into consideration all inherent costs of providing the requested goods and/or services. The Contractor agrees to pay any and all fees, including: government taxes, overhead, profit, parking permits, proper disposal of materials, insurance payments, licenses and registrations. The State will not pay any additional charges beyond the price(s) listed in the contract, unless otherwise provided for by law or expressly allowed by the terms of this contract.

- 1.1 Labor. The Contractor's hourly price shall include, but is not limited to, prevailing wage requirements, equipment and tools normally associated with solar installation, connection and site work, etc. Labor pricing does not include engineering and design work that has been entered as a separate line item.
- 1.2 Permits. Permits required by local authorities shall be secured and paid for by the Contractor. The Contractor will be reimbursed for the actual cost of such permits if the cost is itemized and evidence of the permit and its cost is attached to the invoice to the ordering entity.
- 1.3 Materials. Materials purchased through this Contract must be for furnish and installation. Materials will be furnished on a cost-plus percentage markup basis. Cost is defined as the actual cost the Contractor pays the manufacturer/supplier for the goods/services, less any applicable taxes. Only costs specifically detailed in the billing statement, quote, and/or invoice from the supplier will be subject to the cost plus percentage mark-up detailed on Contract. Copies of the supplier's invoice must be attached to the invoice to the ordering entity.
- 1.4 Contractor pays all freight and adds freight charges to quote/invoice as a separate line item. Freight must be quoted/invoiced as a direct pass through cost. No markup is allowed on freight. Freight charges invoiced may not exceed the quoted price. Upon request by the ordering entity, the Contractor must furnish third party freight quote and/or invoice.
- 1.5 Competitive Pricing. The State reserves the right to require Contractors to secure competitive bids for materials being furnished, or if there are multiple Contractors assigned to a county, the State reserves the right to obtain a written price quote from multiple Contractors. If the Contractor is required to secure competitive bids for materials, the State may request to review documentation to verify that competitive procurement practices have been used.
- 1.6 Taxes.
 - **Furnishing and Installing Product**. The State's Direct Pay permit will not apply for orders against a contract awarded through this solicitation. The Responder must include in their response prices any applicable State or Federal sales, excise, or use tax on all materials, supplies, and equipment that are to be utilized. If orders are issued by CPV members, the Contractor should confirm all of the tax requirements with the ordering entity.
- 1.7 Mileage. The State will pay mileage when travel to and from the job site exceeds 100 miles round trip per day (i.e. accumulated mileage). Each mile exceeding 100 accumulated miles per day may be charged the per mile rate. The accumulated mileage will be determined using the Contractor's closest dispatch center/service location to the job site. The State reserves the right to use Google Maps™ to determine mileage. The State will not pay mileage, labor costs, or any overtime labor associated with travel to pick up materials.

The Contractor will provide a mileage rate multiplier that will be used to calculate the Contractor's total reimbursable mileage rate for this contract.

Formula used to calculate total reimbursable mileage rate:

$$(Current\ Mileage\ Rate) \times (Mileage\ Rate\ Multiplier) = (Reimbursable\ Contract\ Mileage\ Rate)$$

Example: $\$0.575 \times 1.25 = \0.71875 is the reimbursable mileage rate

The current mileage rate can be found on the State of Minnesota Commissioner's Plan, posted on the Office of State Procurement (OSP) website: <http://www.mmd.admin.state.mn.us/commissionersplan.htm>.

State of Minnesota Commissioner's Plan mileage rate will be adjusted annually, but the mileage rate multiplier will not be allowed to increase over the life of the Contract. However, if the Contractor wishes to decrease the multiplier, the State will accept this by executing a Contract Amendment and the decrease must be offered to all users of the Contract.

2. Contract Pricing – Initial Term.

Prices shall remain firm for the initial term of the Contract. A unit price and a total for the quantity must be stated for each item quoted. Contractor may provide lower pricing. Prices must be quoted in United States currency.

**Exhibit D – Attachment 1
Contract Price Schedule**

Contractor's master contract includes a state-approved sample invoice.

Contractor is required to use the approved invoice for all transactions under this Contract. Contractor may not materially change the document unless the change has been approved in writing by the Commissioner of Administration, as delegated to the Office of State Procurement. Contractor may not modify the invoice to provide less detail regarding purchases under the Contract. Contractor hereby waives the right to enforce any term in the sample which contradicts or modifies any term of the solicitation or any Site-Specific Contract that may result, including subsequent amendments to the Site-Specific Contract, or would result in an unencumbered expense if enforced against the state or its CPV members. The State anticipates the invoice will contain, at a minimum:

- Ordering entity name
- Project number (or Site-Specific Contract number)
- Item/service description
- Item quantity or service hours
- Contract price (for cost plus pricing, the actual cost)
- Invoiced amount (or price after cost plus mark up, when applicable)