City of Haven

City Council Meeting

AGENDA

March 4, 2024, at 7:00 p.m.

Haven City Hall, Council Chambers

A. CALL TO ORDER

Moment to Honor Those in Military, First Responders, and other Public Service to our Country & Community

Determine Revisions to Agenda: (Must be added / removed from agenda by motion approved by a majority of those governing body members present and voting.)

B. PUBLIC COMMENT: (Per Ordinance 587, one must sign up in advance of the meeting and provide his / her name and address for the purpose of putting both in the minutes. Remarks limited to five minutes.) None.

C. APPROVE MINUTES: Approve Minutes from Meeting on February 19, 2024.

D. FINANCIALS: Approve Accounts Payable for February 20, 2024, to March 4, 2024.

E. AGENDA ITEMS

1. **Applications to be posted for Pool Manager, Lifeguards, and summer mowing.**

2. **Parallel Generation, James with KPP**

F. PUBLIC WORKS DIRECTOR, CHAD SWARTZ

1. **General Updates**
   a. Parallel Generation Policy
   b. Denied grant for electrical project
   c. Cronus done removing debris
   d. KDHE water line permit for Wildcat Landing
   e. Haven Steel asking for power upgrade on South building
   f. Permission to list items on Purple Wave
      - Leaf Vac
      - Blizzard Snow Plow
      - 1 ton Snow Plow
      - Handicap lift for old pool

2. **Digger Truck Repair –**
   a. Additional repairs and costs - $6,907.78

3. **Water Tower Bypass Quotes**

G. CHIEF OF POLICE, STEPHEN SCHAFFER

1. General Updates

H. EXECUTIVE SESSION (30 minutes)

"I move that the Council recess into executive session regarding the exception allowed for discussion of non-elected personnel to discuss pool matters, the open meeting to resume at ____ PM."

I. COUNCIL MEMBERS CONCERNS

J. AGENDA PLANNING

K. ADJOURNMENT

City of Haven

City Council Meeting

MINUTES - DRAFT

February 19, 2024, at 7:00 p.m.
Haven City Hall, Council Chambers

Meeting: REGULAR **Date: February 19, 2024**

THE CITY COUNCIL MEETING IN REGULAR SESSION HELD AT 120 S. KANSAS AVENUE WAS CALLED TO ORDER AT 7:00 PM BY MAYOR ADAM WRIGHT. THE FOLLOWING PEOPLE WERE PRESENT:

Council Members: Christopher Scott, Ciara Powers, Austin Borden, Nicole Sander, and Sherri Schneider.

Absent: None.

Others: Josephine Harper, Chad Swartz, Chief Schaffer, Scott Ufford, Jitana Graff, Shauna Schoepf-Pearce, Clark Wedel, Harland Foraker, and Rick Gates.

Public Comment: None

Minutes

Powers moved to approve the minutes of the February 5, 2024, meeting. Schneider seconded, and the motion passed unanimously.

Accounts Payable

Scott moved and Powers seconded to approve accounts payable for February 6, 2024, to February 19, 2024, in the amount of $123,482.84. Motion carried.

Agenda Items

1. Recreation Treasurer/Secretary Applicant – Shauna Schoepf-Pearce
   Schoepf-Pearce presented the Recreation Board's applicant, Zoe Wright, for the Secretary/Treasurer position, to the council and discussed nepotism. All future decisions regarding the Recreation Secretary/Treasurer while Zoe Wright is holding the position will require Mayor Wright to recuse himself of involvement regarding employment and pay. Schnieder moved to accept the Rec Boards recommendation of hiring Zoe Wright for Recreation Secretary Treasurer. Borden seconded the motion, and the motion carried.

2. Wildcat Landing Update – Harland Foraker
   Harland Foraker gave an update on where the Wildcat Landing project is progressing.

Executive Session

Borden moves that the Council recess into executive session regarding the exception allowed for discussion of non-elected personnel, the open meeting to resume at 7:52 PM. Powers seconded, motion carried.

Motion to extend for 5 minutes. Schneider motioned and Powers seconded. Motioned passed.

Regular meeting resumed at 7:57 p.m. No action was taken.

Public Works

General updates were given.

1. Digger Truck Repair –
   The quote $8079.58 for work had already been approved by Mayor Wright on 2/14/2024. This allowed work to be started and completed as soon as possible.

2. Midwest Transformer Repair Quote
   Swartz presented the council with a quote of $11,690.00 for repairing multiple transformers. After brief discussion Sander motioned to approve quote to repair all 6 transformers totaling $11,690.00. Borden seconds; motioned carried.

Police Department

Paperwork for the new truck will be ready in mid-March.

Council Member Concerns

Schneider wonders if the drainage at 4th St. at the pool could be improved.

Calendar

March 4, 2024, agenda items were discussed.

Adjournment

At 8:11 PM, adjournment was unanimously approved after a motion from Schneider and second from Borden.

_____
Adam Wright, Mayor

Attest:

_____
Josephine Harper, City Clerk

Interconnection Standards for Installation and Parallel Operation of Customer-Owned Renewable Electric Generation Facilities 25 kW_{AC} or Less for Residential Service and 200 kW_{AC} or Less for Commercial Service

City of Haven, Kansas

_____

March 2024

CONTENTS

PART 1. OVERVIEW

1. PURPOSE:

The purpose of this document is to establish standards for eligible residential and commercial customers ("customer") to interconnect and operate customer-owned inverter-based solar and wind generation facilities with a rated output of 25 kilowatts AC (kW_{AC}) or less for residential service and 200 kilowatts AC (kW_{AC}) or less for commercial service in parallel with the City of Haven("Utility") Electric Distribution System.

2. DEFINITIONS:

a. **AC** – Alternating Current.

b. **Applicable Laws and Regulations** – All duly promulgated applicable federal, state, and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority, including the Ordinances, Regulations, and Utility Rates of the City of Haven.

c. **City** – The City of Haven, Kansas.

d. **Customer** – A residential or commercial electric customer interconnected to the electric distribution system for the purpose of receiving retail electric service that also owns and operates an approved generation facility.

e. **DC** – Direct Current.

f. **Electric Distribution System** – The utility facilities and equipment used to provide electric service to customers, including the customer.

g. **Generation Facility** – For purposes of these Interconnection Standards, the customer device for conversion of solar and wind energy to electricity, as identified in the Interconnection Application, that:

   1. Is an **inverter-based energy facility** with a rated capacity and output of 25 kW_{AC} or less for residential service and 200 kW_{AC} or less for commercial service when including any storage capabilities.

   2. Is owned by the customer.

   3. Is located on the customer's premises.

   4. Serves only the customer's premises (serves no other customers).

   5. Is interconnected with and operates in parallel phase and synchronization with the electric distribution system and is in compliance with these Interconnection Standards.

6. Is sized primarily to offset part of the customer's own electrical energy requirements.
7. Contains a utility-approved mechanism(s) that automatically disconnects the generation facility and interrupts the flow of electricity to the electric distribution system in the event that electric service to the customer is interrupted.
8. Meets all the following generating capacity limitations:
    a. Generator annual energy generation shall not exceed customer's annual energy requirements.
    b. Customer's generator facility shall not exceed customer's total energy usage in the previous 12-month period or 25 kW_{AC} for residential and 200 kW_{AC} for commercial, whichever is less. Generator size may be calculated in kW_{AC}, at the City's discretion, by taking the total kWh usage from the previous 12-month period, dividing it by 365 then multiplying it by 250 then further dividing it by 1000. Or may be calculated by using the customer's estimated average annual demand and shall be calculated by using said customer's historical annual energy usage in kWh divided by 8,760 hours and further dividing by 35% (.35) and multiplying it by 2.
    c. Total customer-owned generating capacity shall not exceed four percent (4%) of the previous year utility peak demand. No generation facility shall be interconnected that would cause total customer-owned generation facility capacity to exceed four percent (4%) of the previous year utility peak demand.

h. **Governmental Authority** – Any federal, state, local or other governmental regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include the customer or any affiliate thereof.

i. **Harmonic Distortion** – Distortion of the normal AC sine wave typically caused by non-linear loads or inverters.

j. **Initial Operation Date** – The date on which the generation facility is operating and is in compliance with the requirements of these Interconnection Standards for Installation and Parallel Operation of Customer-Owned Renewable Electric Generation Facilities 25 kW_{AC} or Less for Residential Service and 200 kW_{AC} or less for Commercial Service as determined by the utility.

k. **Interconnection** – The physical connection of a generation facility to the utility electric distribution system.

l. **Interconnection Application** – The customer request to interconnect a new generation facility, or to increase the capacity of, or make a material modification to the operating characteristics of an existing generation facility that is interconnected with the electric distribution system.

m. **Interconnection Standards** – Interconnection Standards shall mean all provisions, forms and related documents described in the collective parts of these Interconnection Standards for Installation and Parallel Operation of Customer-Owned Renewable Electric Generation Facilities 25 kW_{AC} or less for Residential Service and 200 kW_{AC} or Less for Commercial Service, or successor document.

n. **Metering Point** – The utility electric meter as shown on the one-line diagram accompanying the customer's interconnection application.

o. **Party** – Individually the utility and the customer; collectively the "parties."

p. **Prudent Utility Practice** – Any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods, and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Prudent utility practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region by the electric utility industry.

q. **Reasonable Efforts** – With respect to an action required to be attempted or taken by a party under the Interconnection Agreement, efforts that are timely and consistent with prudent utility practice and are otherwise substantially equivalent to those a party would use to protect its own interests.

r. **Renewable Parallel Generation Residential Service rate schedule and Renewable Parallel Generation Commercial rate schedule for the City of Haven. (See Resolution No XXX).**

s. **System Upgrades** – Additions, modifications, improvements, and upgrades to the electric distribution system or customer service connection at or beyond the point of interconnection to facilitate interconnection of the customer generation facility.

t. **Utility** – City of Haven, Kansas.

u. **Voltage Flicker** – A variation of voltage sufficient in duration to allow visual observation of a change in electric light source intensity.

3. ELIGIBILITY:

a. Must be a residential or commercial electric customer with a customer-owned inverter-based renewable energy generation facility as defined herein that is interconnected behind the meter (connected to the customer side of the electric meter) and single-phase service at 60 Hertz at a nominal voltage of 120/240 volts or three-phase 120/208 or 277/480 volts furnished through a single bidirectional electric meter. Specific metering shall be at utility discretion.

b. Customer-generator's utility account must be in good standing and in compliance with the City's electric rate schedules, electric utility rules and regulations, and these Interconnection Standards for Installation and Parallel Operation of Customer-Owned Residential and Commercial Renewable Energy Generation Facilities.

c. A generation facility that is not a renewable energy generation facility as defined herein or if such facility has a rated output greater than 25 kW_{AC} for residential customer-generators and 200 kW_{AC} for commercial or industrial customer-generators is subject to separate negotiation with the City and is not eligible to interconnect with the electric distribution system under these Interconnection Standards.

d. For purposes of these Interconnection Standards, an eligible generation facility must:

(1) Be powered by a renewable energy resource as defined in Kansas Statutes Annotated 66-1264 and amendments thereto.

(2) Be owned by the customer-generator.

(3) Be located on a premise(s) owned by the customer-generator.

(4) Serve only the customer-generator's premises (serve no other customers).

(5) Be interconnected with and operate in parallel phase and synchronization with the electric distribution system.

(6) Comply with these Interconnection Standards for Installation and Parallel Operation of Customer-Owned Residential, Commercial and Industrial Renewable Energy Generation Facilities.

(7) Be intended primarily to offset part or all the customer-generator's own electrical energy requirements.

(8) Contain a City-approved mechanism(s) that automatically disconnects the generation facility and interrupts the flow of electricity back onto the electric distribution system in the event that electric service to the customer-generator is interrupted.

(9) Meet all the following generator output limitations:

a. For residential customer-generators, 25 kW_{AC} or less.

b. For commercial customer-generators, 200 kW_{AC} or less.

c. Be appropriately sized to the customer-generator's electric load as determined by the City.

d. Total customer-owned generator rated output in kW_{AC} under the City's parallel generation rate rider shall not exceed four percent (4%) of the previous calendar year City electric system peak demand. No generation facility shall be interconnected that would cause the rated output of all customer-owned generation facilities under the parallel generation rate rider to exceed four percent (4%) of the previous calendar year electric system peak demand.

4. INTERCONNECTION REQUEST:

The customer shall request interconnection of a generation facility by completing and submitting to the utility the attached document entitled 'Interconnection Application." The utility may require additional information or clarification to evaluate the customer interconnection Request. Interconnection applications will be reviewed by the utility in the order in which they are received. If an interconnection application is viewed as incomplete, the utility will provide notice to the customer that the application is not complete, provide a description of the information needed to complete the application, and include a statement that processing of the application cannot begin until the application is complete.

5. ELECTRIC DISTRIBUTION SYSTEM IMPACT ANALYSIS:

The purpose of the distribution system impact analysis is to determine if the generation facility will have an adverse impact on the electric distribution system equipment. After receiving a properly completed Interconnection Application, the utility will analyze the potential impact of the proposed generation facility on the electric distribution system and on other utility customers. Such analyses will be based on prudent utility practice to determine thermal effects, voltage ranges, power quality, system stability, etc., and will include the following:

a. The customer generation facility's proposed interconnection point is on a radial distribution circuit and not a transmission line.

b. The proposed generation facility complies with IEEE 1547 and UL 1741 or successor standards.

c. The proposed generation facility's capacity in aggregation with other generation on the circuit shall not exceed 15 percent (15%) of the total circuit peak demand (kW) as most

recently measured at the substation during the previous 12-month period; nor shall it exceed 15 percent (15%) of a distribution circuit line section annual peak demand (kW).

d. The proposed generation facility, in aggregation with other generation on the distribution circuit, shall not contribute more than 10 percent (10%) to the distribution circuit's maximum fault current at the point on the primary voltage distribution line nearest the proposed interconnection point.

e. The proposed generation facility, in aggregation with other generation located on the distribution circuit, may not cause any distribution protective devices and equipment (including substation breakers, fuse cutouts, and line reclosers, or other customer equipment on the electric distribution system to be exposed to fault currents exceeding 85 percent (85%) of the short circuit interrupting capability).

f. No additional generation facilities shall be interconnected on a circuit that equals or exceeds 85 percent (85%) of its short circuit interrupting capability.

g. No generation facility shall be interconnected that would cause the total interconnected customer-owned generating facility capacity to exceed four percent (4%) of the previous year utility system peak demand.

h. When a proposed generation facility is single-phase and is to be interconnected on a center tap neutral on a 240-volt service, its addition shall not create an imbalance between the two sides of the 240-volt service of more than 20 percent of the nameplate rating of the service transformer.

i. The proposed generation facility installation must be certified to pass an applicable non-islanding test or use reverse power relays or other means to meet IEEE 1547 unintentional islanding requirements.

j. A review of the type of electrical service provided to the customer, including line configuration, and the transformer connection, will be conducted to limit the potential for creating over voltages on the electric distribution system due to a loss of ground during the operation time of any anti-islanding function.

k. When the proposed generation facility is to be interconnected on a single-phase shared secondary line, the aggregate generation capacity on the shared secondary line, including the proposed generation facility, shall not exceed ten kilowatts (10 kW_{AC}).

6. SYSTEM UPGRADES:

The utility shall not be obligated to make upgrades or improvements to its electric distribution system to accommodate the customer's generation facility. Where system upgrades are required prior to interconnection of the generation facility as identified in the system impact study, the utility will provide the customer with an estimated schedule and the customer's cost for said system upgrades.

7. INTERCONNECTION AGREEMENT:

After the customer and the utility have identified and mutually agreed on the project scope including the generation facility, system upgrades, and estimated costs (if any), the customer and the utility shall execute the attached document entitled "Interconnection Agreement." The Interconnection Agreement shall be between the utility and the customer and shall not include third parties. Prior to commencement of system upgrades required to allow interconnection of the customer-owned generation facility, customer shall deposit with the utility an amount equal to the estimated cost of said system upgrades. See "Section 4. Interconnection Costs" of the Interconnection Agreement (Part 4) for additional information.

8. CODES AND PERMITS:

a. The customer shall be responsible for procuring all building, operating, environmental, or other permits for the generation facility and for the necessary ancillary structures to be installed that are required by any governmental authority having jurisdiction.

b. The generation facility and interconnecting equipment shall meet all requirements in "Part 2. Technical Requirements" of these Interconnection Standards.

c. The construction and facilities shall meet all applicable building and electrical codes.

9. CERTIFICATE OF COMPLETION:

Upon completion of the generation facility and prior to the initial operation date of said facility, the customer shall complete and submit a signed copy of the attached document entitled "Certificate of Completion."

10. NORMAL OPERATION:

The customer may begin initial operation of the generation facility upon receipt of written approval from the utility.

PART 2. TECHNICAL REQUIREMENTS

1. CHARACTER OF SERVICE:

The electric service shall be 60 cycles per second (60 Hertz) alternating current (AC) at supply voltages and single phase under the residential rate schedule that would apply if the customer did not have an interconnected generation facility.

2. CODE REQUIREMENTS:

The generation facility shall meet all requirements established by the National Electrical Code (NEC), National Electrical Safety Code (NESC), Institute of Electrical and Electronics Engineers (IEEE), Underwriters Laboratories (UL), and the Occupational Safety and Health Administration. Specific applicable codes are shown in Section 9 of this Part 2 below as Standards for Interconnection, Safety and Operating Reliability." In addition, manufacturer's ownership, operation and maintenance manuals or documents and applicable equipment settings shall be provided to the utility with the interconnection application. The utility shall review said manuals or documents as part of the interconnection application review process.

3. GENERATION FACILITY CONTROL:

The control system of the generation facility shall comply with IEEE and UL specifications and standards for parallel operation with the electric distribution system and in particular as follows:

a. Power output control system shall automatically disconnect from the electric distribution system upon loss of system voltage and shall not reconnect until system voltage has been restored.

b. Power output control system shall automatically disconnect from the electric distribution system if system voltage fluctuates beyond plus or minus ten percent (10%).

c. Power output control system shall automatically disconnect from the electric distribution system if the generator fails to operate within the operating frequency range of 59.3 – 60.5 Hz.

d. Inverter output harmonic distortion shall meet IEEE and UL standards.

e. The generation facility shall meet applicable IEEE and UL standards concerning impacts to the electric distribution system with regard to harmonic distortion, voltage flicker, power factor, direct current injection, and electromagnetic interference.

4. LIMITS SPECIFIC TO SINGLE-PHASE GENERATION FACILITIES:

When connected to a single-phase transformer, the generation facility must be installed such that the aggregated gross output is balanced between the two phases of the single-phase voltage and the maximum aggregated gross ratings for all the generating facilities shall not exceed the transformer rating.

4.1 LIMITS SPECIFIC TO THREE-PHASE GENERATION FACILITIES:

The applicant must balance the demand load and the generation facility as nearly as practical between the two sides of a three-wire single phase service and between all phases of a three-phase service. The difference in amperes between any two phases at the customer's peak load should not be greater than 10 percent or 50 amperes (at the service delivery voltage), whichever is greater; except that the difference between the load on the lighting phase of a four-wire delta service and the load on the power phase may be more than these limits. It will be the responsibility of the customer to keep the demand load balanced within these limits.

5. SYSTEM PROTECTION:

The owner of the customer owned generator is responsible for providing adequate protection to electric utility facilities for conditions arising from the operation of generation under all utility distribution system operating conditions. The owner is also responsible for providing adequate protection to its facility under any utility distribution system operating condition whether or not its customer owned generator is in operation. Conditions may include but are not limited to:

a. Loss of a single phase of supply.

b. Distribution system faults.

c. Equipment failures.

d. Abnormal voltage or frequency.

e. Lightning and switching surges.

f. Excessive harmonic voltages.

g. Excessive negative sequence voltages.

h. Separation from supply.

i. Synchronizing generation.

j. Re-synchronizing the owner's generation after electric restoration of the supply.

6. FAULT CURRENT DISCONNECTION:

The generation facility shall be equipped with protective equipment designed to automatically disconnect from the electric distribution system during fault current conditions and remain disconnected until system voltage and frequency have stabilized.

7. RECLOSING COORDINATION:

The generation facility shall be coordinated with electric distribution system reclosing devices by disconnecting from the electric distribution system during de-energized electric distribution system operation. The generation facility shall remain disconnected until customer is notified by utility representatives that it is safe to reconnect the generation facility.

8. EXTERNAL GENERATOR AC DISCONNECT SWITCH AND GENERATOR METER:

The customer shall install an external alternating current (AC) disconnect switch within six (6) feet of the utility electric meter(s) that is visible and readily accessible to utility representatives at all times. This switch shall be clearly labeled as "Generator AC Disconnect Switch." The switch shall be capable of being locked in an open position and shall prevent the generation facility from supplying power to the electric distribution system while in the open position. The customer shall, at no cost to the City, install City approved equipment capable of receiving a City provided electric meter ahead of the above generator disconnect to meter generator output for means of billing, monitoring and system impact studies.

9. STANDARDS FOR INTERCONNECTION, SAFETY AND OPERATING RELIABILITY:

The interconnection of a generation facility and associated equipment to the electric distribution system shall meet the applicable provisions of the following publications or successor standards:

a. ANSI/IEEE1547-2003, *Standard for Interconnecting Distributed Resources with Electric Power Systems (including use of IEEE 1547.1 testing protocols to establish conformity).* The following standards shall be used as guidance in applying IEEE 1574:

   1. IEEE Standard 519-1992, *IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems.*

   2. IEC/TR3 61000-3-7, *Assessment of Emission Limits for Fluctuating Loads in MV and HV Power Systems.*

b. UL 1741, *Standard for Inverters, Converters, and Controllers for Use in Independent Power Systems.*

c. ANSI/NFPA 70 (2008), *National Electrical Code.*

d. OSHA (29 CFR § 1910.269).

e. IEEE Standard 929-2000, *IEEE Recommended Practice for Utility Interface of Photovoltaic (PV) Systems.*

f. IEEE Standard C37.90.1-1989 (R1994), *IEEE Standard Surge Withstand Capability (SWC) Tests for Protective Relays and Relay Systems.*

g. IEEE Standard C37.90.2 (1995), *IEEE Standard Withstand Capability of Relay Systems to Radiated Electromagnetic Interference from Transceivers.*

h. IEEE Standard C37.108-1989 (R2002), *IEEE Guide for the Protection of Network Transformers.*

i. IEEE Standard C57.12.44-2000, *IEEE Standard Requirements for Secondary Network Protectors.*

j. IEEE Standard C62.41.2-2002, *IEEE Recommended Practice on Characterization of Surges in Low Voltage (1000V and Less) AC Power Circuits.*

k. IEEE Standard C62.45-1992 (R2002), *IEEE Recommended Practice on Surge Testing for Equipment Connected to Low-Voltage (1000V and Less) AC Power Circuits.*

l. IEEE Standard 100-2000, *IEEE Standard Dictionary of Electrical and Electronic Terms.*

m. ANSI C84.1-1995, *Electric Power Systems and Equipment – Voltage Ratings (60 Hertz).*

n. NEMA MG 1-1998, *Motors and Generators, Revision 3.*

o. IEEE Standard 2030.2, *Guide for the Interoperability of Energy Storage Systems Integrated with the Electric Power Infrastructure (Including use of IEEE 2030.3 testing protocols to establish conformity).*

10. ACCESS AND INSPECTION BY UTILITY:

Customer shall provide the utility reasonable opportunity to inspect the generation facility prior to its interconnection and initial operation date and to witness initial testing and commissioning of the generation facility. The utility may witness any commissioning tests required by IEEE 1547/UL 1741.

Following initial testing and inspection of the generation facility and upon reasonable advance notice to customer, the utility shall have access at all reasonable times to the generation facility to perform on-site inspections to verify that the installation, maintenance, and operation of the generation facility complies with the requirements of these Interconnection Standards. The utility cost of such inspection(s) shall be at utility expense; however, the utility shall not be responsible for any cost customer may incur as a result of such inspection(s). Upon written request, customer shall inform the utility of the next scheduled maintenance and allow the utility to witness the maintenance program and

any associated testing. The utility shall at all times have immediate access to the external generator AC disconnect switch to isolate the generation facility from the electric distribution system.

11. GENERATION FACILITY OPERATION:

a. Customer shall install, operate, and maintain, at customer's sole cost and expense, the generation facility in accordance with the manufacturer's suggested practices for safe, efficient, and reliable operation of the generation facility in parallel with the electric distribution system. Customer shall bear full responsibility for the installation, maintenance, and safe operation of the generation facility. Upon request from the utility, customer shall supply copies of periodic test reports or inspection logs, which will at a minimum be requested annually.

b. Customer shall be responsible for protecting, at customer's sole cost and expense, the generation facility from any condition or disturbance on the electric distribution system, including, but not limited to, voltage sags or swells, system faults, outages, loss of a single phase of supply, equipment failures, and lightning or switching surges.

c. Customer agrees that, without prior written permission from the utility, no changes shall be made to the configuration of the generation facility as approved by the utility, and no relay or other control or protection settings shall be set, reset, adjusted, or tampered with, except to the extent necessary to verify that the generation facility complies with utility-approved settings.

d. Customer shall operate the generation facility in such a manner as not to cause undue voltage fluctuations, power quality issues, intermittent load fluctuation characteristics or to otherwise interfere with the operation of the electric distribution system. At all times when the generation facility is operated in parallel with the electric distribution system, customer shall operate said generation facility in such a manner that no disturbance will be produced thereby to the service rendered by the utility to any of its other customers or to any electric system interconnected with the electric distribution system. Customer understands and agrees that the interconnection and operation of the generation facility pursuant to these interconnection standards is secondary to, and shall not reduce the safety, quality, or reliability of electric service provided by the utility.

e. Customer's control equipment for the generation facility shall immediately, completely, and automatically disconnect and isolate the generation facility from the electric distribution system in the event of a fault on the electric distribution system, a fault on customer's electric system, or loss of a source or sources on the electric distribution system. The automatic disconnecting device included in such control equipment shall not be capable of reclosing until after service is restored on the electric distribution

system. Additionally, if the fault is on customer's electric system, such automatic disconnecting device shall not be reclosed until after the fault is isolated from the customer's electric system.

f. The City shall be notified before any changes are made to the generation facility that occurs after the final approval of interconnection and has the right to no longer allow interconnection if the changes do not meet the qualifications of these standards.

12. RIGHT TO DISCONNECT GENERATION FACILITY:

The utility shall have the right and authority to disconnect and isolate the generation facility without notice, at utility's sole discretion if the utility believes that any of the following has occurred or is occurring:

a. Electric service to customer's premises is discontinued for any reason.

b. Adverse electrical effects (such as power quality problems) on the electric distribution system and/or the electrical equipment of other utility customers attributed to the generation facility as determined by the utility.

c. Electric distribution system emergencies or maintenance requirements.

d. Hazardous conditions existing on the electric distribution system as a result of the operation of the generation facility or protective equipment.

e. Failure of the customer to obtain and maintain required insurance and to provide the utility with proof of insurance within ten (10) days of request.

f. Utility identification of uninspected or unapproved equipment or modifications to the generation facility after initial approval.

g. Recurring abnormal operation, substandard operation, or inadequate maintenance of the generation facility.

h. Noncompliance with the obligations under the Interconnection Agreement. In non-emergency situations, the utility shall give customer notice of noncompliance including a description of the specific noncompliance condition and allow customer a reasonable time to cure the noncompliance prior to disconnecting and isolating the generation facility.

i. Failure to remit payment to the utility for any amounts owed, including but not limited to, amounts invoiced pursuant to Paragraph 15 of this agreement.

j. In the event that the utility disconnects the generation facility for routine maintenance, the utility shall make reasonable efforts to reconnect the generation facility as soon as practicable.

k. The customer retains the option to temporarily disconnect its generation facility from the electric distribution system at any time. Such temporary disconnection shall not constitute termination of the Interconnection Agreement unless the customer exercises its termination rights under Section 16 of Part 2.

13. RATES AND OTHER CHARGES:

a. Customer must participate in the Renewable Parallel Generation - Residential Service rate schedule or Renewable Generation - Commercial Service rate schedule as a condition of interconnecting a Customer-Owned Generating Facility **(Resolution No XXX).**

b. Customer must complete and submit to the utility the Renewable Energy Parallel Generation Application for Service in Part 7. The utility shall not approve a Customer-Owned Generation Facility Interconnection Application that does not include a completed Renewable Energy Parallel Generation Application for Service.

c. Terms and conditions of service are contained in the Renewable Parallel Generation – Residential Service rate schedule, Interconnection Standards for Installation and Parallel Operation of Customer-Owned Renewable Electric Generation Facilities 25 kW_{AC} or Less for Residential Service and 200 kW_{AC} or Less for Commercial Service.

d. Customer must participate in the electric utility's Renewable Parallel Generation – Residential Service rate schedule or Renewable Parallel Generation – Commercial Service Rate Schedule if the customer wishes to receive credit for any excess energy generated by the customer and delivered to the utility.

14. INSURANCE:

Customer shall at its own expense obtain and continuously maintain bodily injury, property damage liability, and general liability insurance, without any exclusion for liabilities related to the interconnection undertaken pursuant to the Interconnection Agreement. The amount of such insurance shall be a minimum of $100,000 to insure against all reasonably foreseeable liabilities and risks related to the generation facility, the ownership, and operation of such generation facility, and the interconnection itself. Such insurance must be obtained from an insurance provider authorized to do business in the State of Kansas. Customer shall provide proof of insurance to the utility not later than ten (10) days prior to the commercial operation date of the generation facility. Utility shall not interconnect the generation facility absent submission by the customer of proof of insurance in accordance with these Interconnection Standards. Thereafter customer shall provide proof of insurance to the utility within ten (10) days of such request by the utility. Utility receipt of proof of insurance does not imply an endorsement of the terms and conditions of said coverage. Customer shall promptly notify the utility whenever an accident or incident occurs resulting

in injuries or damages that are included within the scope of coverage of such insurance, regardless if the customer intends to submit a claim under such policy. The customer shall present proof of insurance every year within 30 days after the anniversary of the customer's receipt of approval and authorization to energize the generation facility in order to recertify the facility's generation and interconnection for the following year.

15. LIMITATION OF LIABILITY AND INDEMNIFICATION:

a. **Limitation of Liability**

Each party's liability to the other party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees and court fees, relating to or arising from any act or omission in its performance of the Interconnection Agreement, shall be limited to the amount of direct damage actually incurred. In no event shall the utility or the City of Haven be liable for any indirect, special, consequential, or punitive damages.

b. **Indemnity**

Customer assumes all liability for, and shall indemnify, defend and hold the utility and the City of Haven harmless from, any and all claims, losses, costs, and expenses of any kind or character, direct or indirect, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, labor costs, and all other obligations by or to third parties arising out of or resulting from the design, construction, operation or maintenance of the generation facility, or the customer's actions or omissions in breach of its obligations under the Interconnection Agreement. Such indemnity shall include, but is not limited to, financial responsibility for: (a) utility monetary losses; (b) reasonable costs and expenses of defending an action or claim made by a third party; (c) damages related to the death or injury of a third party; (d) damages to utility property; (e) damages to the property of a third party; (f) damages for the disruption of the business of a third party. The limitations of liability provided in this paragraph do not apply in cases of gross negligence or intentional wrongdoing. If the utility or the City of Haven incurs any costs as to which the indemnity provided in this section b. applies, the utility or City of Haven shall invoice the customer for such costs in writing. Customer shall remit payment to the utility or the City of Haven, as appropriate, within 45 calendar days of the date of such invoice.

16. EFFECTIVE TERM AND TERMINATION RIGHTS:

The Interconnection Agreement shall become effective when executed by both parties and shall continue in effect until terminated in accordance with the provisions of this section. The Interconnection Agreement may be terminated for the following reasons:

a. Electric service to customer's premises is discontinued for any reason. If electric service is disconnected for any reason or a change occurs in the account holder, a new Interconnection Application must be submitted to the electric utility for consideration.

b. Customer may terminate the Interconnection Agreement at any time by giving the utility at least sixty (60) days prior written notice stating customer's intent to terminate the agreement at the expiration of such notice period.

c. The utility may terminate the Interconnection Agreement at any time following customer's failure to generate energy from the generation facility in parallel with the electric distribution system by the later of two (2) years from the date of execution of the Interconnection Agreement or during any twelve (12) month period following completion of the interconnection provided for by the agreement.

d. The utility may terminate the Interconnection Agreement at any time by giving customer at least sixty (60) days prior written notice in the event the customer generates and delivers to the utility more energy than customer consumes within a calendar year for two consecutive years or more.

e. Either party may terminate the Interconnection Agreement at any time by giving the other party at least sixty (60) days prior written notice that the other party is in default of any of the material terms and conditions of the Interconnection Agreement or these Interconnection Standards for Installation and Parallel Operation of Customer-Owned Renewable Electric Generation Facilities 25 kW_{AC} or Less for Residential Service and 200 kW_{AC} or less for Commercial Service, so long as the notice specifies the basis for termination and there is reasonable opportunity for the party in default to cure the default; or

f. The utility may terminate the Interconnection Agreement at any time by giving customer at least sixty (60) days prior written notice in the event that there is a change in an applicable rule or statute affecting the agreement.

Upon termination of the Interconnection Agreement, customer's generation facility shall be permanently disconnected from the electric distribution system.

Termination of the Interconnection Agreement shall not relieve either party of its liabilities and obligations, owed or continuing at the time of said termination.

17. TERMINATION OF ANY APPLICABLE PRIOR AGREEMENT:

From and after the date when service commences under the Interconnection Agreement, the agreement shall supersede any oral and/or written agreement or understanding between the utility and customer concerning the interconnection service covered by the agreement. Any such prior agreement or understanding shall be deemed to be terminated as of the date interconnection service commences under the Interconnection Agreement.

18. FORCE MAJEURE:

For purposes of the Interconnection Agreement, the term "Force Majeure" means any cause or event not reasonably within the control of the party claiming Force Majeure, including, but not limited to, the following: acts of God, strikes, lockouts, or other industrial disturbances; acts of public enemies; orders or permits or the absence of the necessary orders or permits of any kind which have been properly applied for from the government of the United States, the State of Kansas, any political subdivision or municipal subdivision or any of their departments, agencies or officials, or any civil or military authority; unavailability of a fuel or resource used in connection with the generation of electricity; extraordinary delay in transportation; unforeseen soil conditions; equipment, material, supplies, labor or machinery shortages; epidemics; landslides; lightning; earthquakes; fires; hurricanes; tornadoes; storms; floods; washouts; drought; arrest; war; civil disturbances; explosions; breakage or accident to machinery, transmission lines, pipes or canals; partial or entire failure of utilities; breach of contract by any supplier, contractor, subcontractor, laborer or materialman; sabotage; injunction; blight; famine; blockade; or quarantine. A Force Majeure event does not include an act of negligence or intentional wrongdoing.

If either party is rendered wholly or partially unable to perform its obligations under the Interconnection Agreement because of Force Majeure, both Parties shall be excused from whatever obligations under the Agreement are affected by the Force Majeure (other than the obligation to pay money) and shall not be liable or responsible for any delay in the performance of, or the inability to perform, any such obligations for so long as the Force Majeure continues. The Party suffering an occurrence of Force Majeure shall, as soon as is reasonably possible after such occurrence, give the other Party written notice describing the particulars of the occurrence and shall use reasonable efforts to remedy its inability to perform; provided, however, that the settlement of any strike, walkout, lockout, or other labor dispute shall be entirely within the discretion of the Party involved in such labor dispute.

PART 3. INTERCONNECTION APPLICATION

Application No. _____

City of Haven
Customer-Owned Renewable Electric Generation Facility 25 kW_{AC} or Less for Residential Service and 200 kW_{AC} or Less for Commercial Service

This application for Interconnection of a Customer-Owned Renewable Electric Generation Facility 25 kW_{AC} or less for Residential Service and 200 kW_{AC} or less for Commercial Service is considered complete when it provides all applicable and correct information required below. The City of Haven electric utility may require additional information or clarification to evaluate the Interconnection Application. Processing of this application cannot begin until all information is complete.

Processing Fee

❑ A non-refundable processing fee of $150.00 must accompany this application. **[Fee is discretion of the City]**

Customer

Name: _____ Utility Account Number: _____

Address: _____

City: _____State: _____ Zip: _____

Telephone (Day): _____ (Evening): _____

Fax: _____E-Mail Address: _____

Is the generation facility owned by the customer listed above? ❑ Yes ❑No

Contact (if different from customer)

Name: _____

Address: _____

City: _____State: _____ Zip: _____

Telephone (Day): _____ (Evening): _____

Fax: _____E-Mail Address: _____

Generation Facility Information

Location (if different from above): _____

Inverter Manufacturer:_____

Model:_____

Nameplate Rating: (kW_{DC}) _____ (kVA_{AC}) _____

System Design Capacity: (kW_{DC}) _____ (kVA_{AC}) _____

Energy Source: Solar ❑ Wind ❑ Battery/Storage ❑

Is the generation facility equipment IEEE 1547/UL 1741 certified? ❑ Yes❑No
[Note: Requires a Yes for an application to be considered complete.]

If yes, attach manufacturer's documentation and technical specification sheet showing IEEE 1547/UL 1741 certification.

Have all necessary government permits, and approvals been obtained for the project prior to this application?

❑ Yes ❑No [Note: Requires a yes for an application to be considered complete.]

Is utility accessible external generator AC disconnect switch provided? (Required) ❑ Yes ❑No

Location of accessible external generator AC disconnect Switch: _____
(e.g., Two feet west of utility electric meter)

Estimated generation facility installation date: _____

Estimated generation facility initial operation date: _____

List components of the generation facility equipment package that are currently certified:

	Equipment Type	Certifying Entity
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____

Equipment Installation Contractor: **Indicate installation by owner if applicable** ❑

Name: _____
Mailing Address: _____
City: _____ State: _____ Zip Code: _____
Contact Person (If other than Above): _____
Telephone (Daytime): _____ (Evening): _____
Facsimile Number: _____ E-Mail Address: _____

Electrical Contractor: (If Applicable) **Indicate if not applicable** ❑

Name: _____
Mailing Address: _____
City: _____ State: _____ Zip Code: _____
Contact Person (If other than Above): _____
Telephone (Daytime): _____ (Evening): _____

Facsimile Number: _____ E-Mail Address: _____

Consulting Engineer: (If Applicable) **Indicate if not applicable** ❑

Name: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Contact Person (If other than Above): _____

Telephone (Daytime): _____ (Evening): _____

Facsimile Number: _____ E-Mail Address: _____

Provide a one-line diagram of the generation facility. The one-line diagram is a basic drawing of an electric circuit in which one or more conductors are represented by a single line and each electrical device and major component of the installation, from the generator to the point of interconnection, are noted by symbols. See attached example.

Provide a site layout of the generation facility and nearby features. The site layout is a basic drawing showing the location of the generation facility, electric utility electric meter, AC and DC disconnect switches, existing electrical panels, disconnects, utility transformers, conduit/conductor runs, and lockout locations.

Copies of manufacturer's specification sheets for all generation facility equipment, inverters, and other proposed generation facility equipment must be submitted with this application.

Customer Signature

I hereby certify that, to the best of my knowledge, the information provided in this Interconnection Application is true. I agree to abide by the terms and conditions of the City of Haven (utility) Interconnection Standards for Installation and Parallel Operation of Customer-Owned Renewable Electric Generation Facilities 25 kW_{AC} or Less for Residential Service and 200 kW_{AC} or less for Commercial Service and will return the Certificate of Completion to the utility when the generation facility has been installed and prior to commencing operation of said generation facility.

Signature: _____ Date: _____

---------- **City of Haven Utility Use** ----------

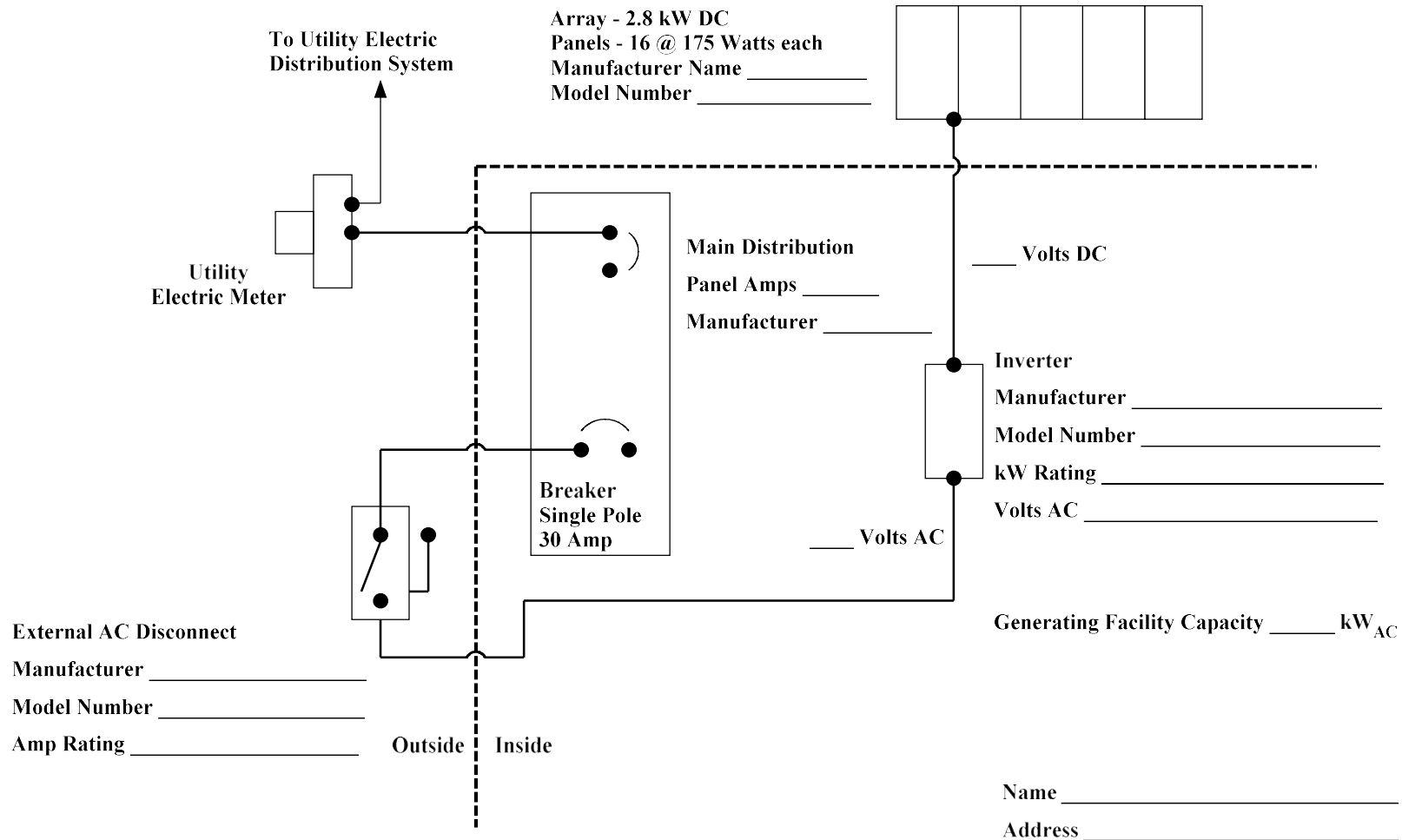
Contingent Approval to Interconnect the Generation Facility

Interconnection of the generation facility is approved contingent upon customer compliance with all terms and conditions of the electric utility's Interconnection Standards and upon return of the Certificate of Completion prior to commencement of commercial operation of said generation facility.

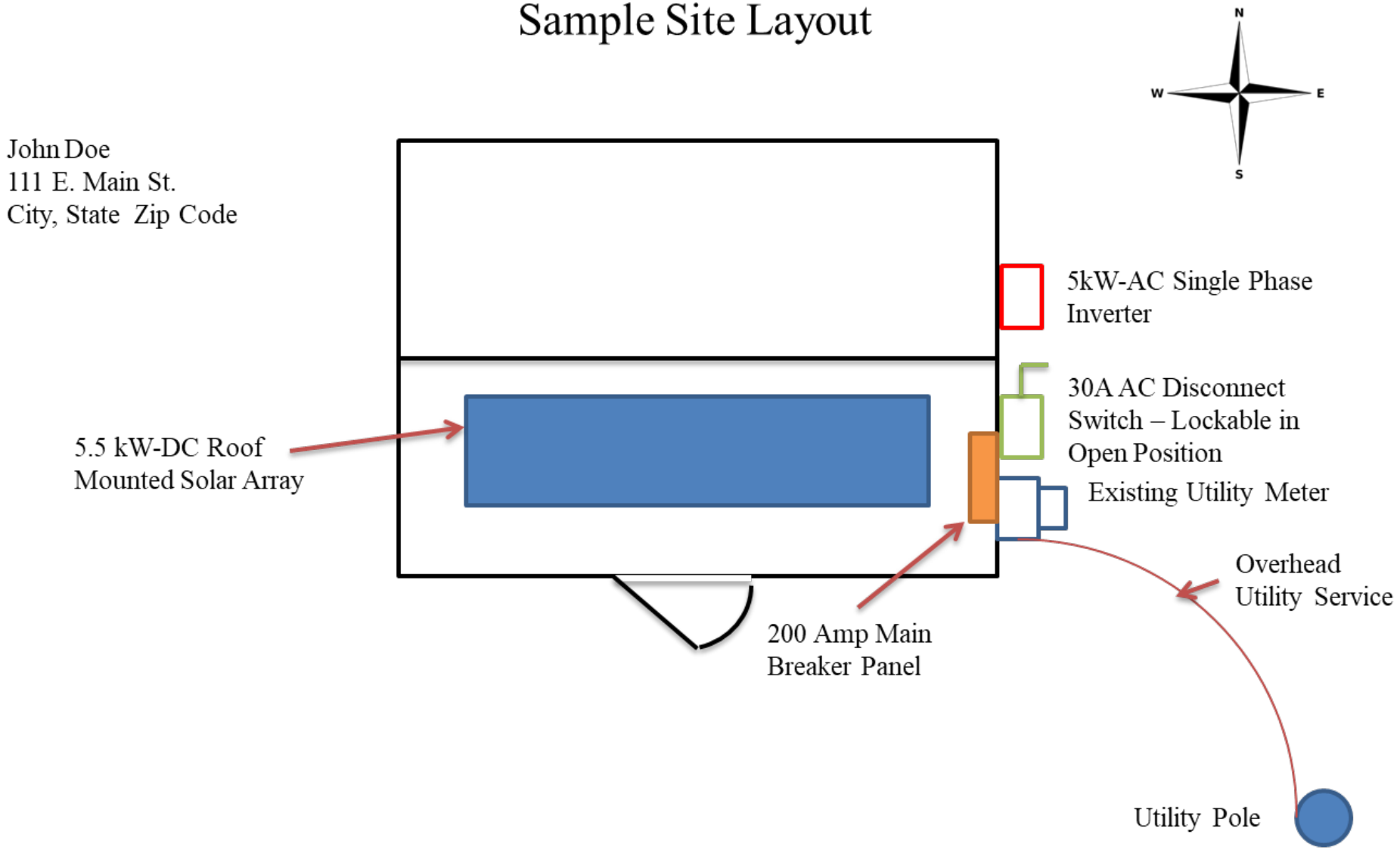
Signature: _____Title:_____

Date: _____ Application Number: _____

One Line Diagram Example



Sample Site Layout



PART 4. INTERCONNECTION AGREEMENT

Application No. _____

City of Haven, Kansas
Customer-Owned Renewable Electric Generation Facility 25 kW_{AC} or Less for Residential Service and 200 kW_{AC} or Less for Commercial Service

This Agreement, ("**agreement**") is entered into by and between the City of Haven, Kansas **("utility")** and _____, ("**customer**"). The customer electric account subject to this agreement is account number _____. Customer and utility are referenced in this agreement collectively as "**parties**" and individually as "**party**."

Recitals

WHEREAS, the utility owns and operates an electric distribution system serving the City of Haven, Kansas, and surrounding area;

WHEREAS, customer owns or desires to install, own and operate a utility-approved renewable, electric generation facility with a rated output of 25 kW_{AC} or less for Residential Service and 200 kW_{AC} or less for Commercial Service, interconnected with and operating in parallel with the utility electric distribution system;

Agreement

NOW, THEREFORE, in consideration of the covenants and promises herein, the parties mutually agree as follows:

1. **SCOPE OF AGREEMENT:**
   This agreement governs the terms and conditions under which the generation facility will interconnect with and operate in parallel with the electric distribution system.

2. **DEFINITIONS:**
   The definitions used in this Interconnection Agreement are those found in Part 1, Section 2 of the utility Interconnection Standards for Installation and Parallel Operation of Customer-Owned Renewable Electric Generation Facilities 25 kW_{AC} or Less for Residential Service and 200 kW_{AC} or Less for Commercial Service.

3. **PARALLEL OPERATION:**

Customer shall not interconnect or commence parallel operation of the generation facility until written approval to energize the generation facility under Part 6 of these Interconnection Standards has been provided by the utility. The utility shall have the right to have representatives present during initial testing of the generation facility and its protective apparatus.

4. **INTERCONNECTION COSTS:**

The utility has estimated the costs, including overheads, for necessary system upgrades to its electric distribution system and customer service connection, if any, and has provided a detailed itemization of such costs in the attached description of estimated system upgrade costs. Prior to commencement of system upgrades that are required to allow interconnection of the customer-owned generation facility, customer shall deposit with the utility an amount equal to the estimated cost of said System Upgrades. If the actual costs of said system upgrades are less than the amount deposited by the customer, the utility shall refund the difference to the customer within 60 days of completing said system upgrades. If the actual costs of said system upgrades exceed the amount deposited by the customer, the utility shall bill the customer for the difference. Customer agrees to pay the invoiced amount within 30 days of the invoice date. The utility will supply, own, and maintain all necessary meters and associated equipment utilized for billing. In addition, and for the purposes of monitoring customer generation and load, the utility may install at its expense, load research metering. The customer shall supply, at no expense to the utility, a suitable location for meters and associated equipment used for billing and for load research. All costs related to installation of said meter or meters shall be borne by the customer.

5. **INTERRUPTION OR REDUCTION OF DELIVERIES:**

The utility may require the customer to interrupt or reduce energy deliveries when the utility determines, in its sole discretion, that curtailment, interruption, or reduction is necessary because of maintenance, safety, emergency, Force Majeure, or compliance with prudent utility practice. No compensation or credit will be provided to the customer by the utility for such interruptions or reductions in energy deliveries.

6. **ADVERSE OPERATING EFFECTS:**

The interconnection of the generation facility shall not reduce the reliability and quality of utility electric distribution system service. This includes but is not limited to power quality issues such as harmonic distortion, voltage flicker, and frequency deviations. The utility shall notify the customer as soon as practicable if, based on prudent utility practice, operation of the generation facility causes disruption in or deterioration of service to other utility electric customers or if operating the generation facility could damage the electric distribution system. If, after notice, the customer fails to timely remedy the adverse operating effect, the utility may disconnect the generation facility with no further notice.

7. **COMPLIANCE WITH INTERCONNECTION STANDARDS REQUIREMENTS:**

Customer has read the utility Interconnection Standards for Installation and Parallel Operation of Customer-Owned Renewable Electric Generation Facilities 25 kW_{AC} or Less for Residential Service and 200 kW_{AC} or Less for Commercial Service, as adopted by the utility, and agrees to comply with all requirements included therein, including, but not limited to, all insurance and indemnity provisions identified in paragraphs 14 and 15 therein.

8. **ACCESS TO PREMISES:**

The utility shall have access to the customer premises or property and to the external AC generator disconnect switch as permitted in its policies, rules and regulations and Interconnection Standards.

9. **GOVERNING LAW:**

This agreement shall be interpreted and governed under the laws of the State of Kansas, the Ordinances of the City of Haven, and **[Utility Electric Rates and Regulations]**.

10. **DOCUMENTS:**

This agreement incorporates all other provisions and related documents of these Interconnection Standards for Installation and Parallel Operation of Customer-Owned Renewable Electric Generation Facilities 25 kW_{AC} or Less for Residential Service and 200 kW_{AC} or Less for Commercial Service as the same may be amended from time to time.

11. **NOTICES:**

All written notices shall be directed as follows:

Customer:	**City of Haven:**
Name: _____	Name: _____
Address: _____	Title: _____
City/State/Zip: _____	City/State/Zip: _____

12. **TERM OF AGREEMENT:**

This agreement shall be in effect when executed by the customer and the City of Haven and shall remain in effect thereafter month to month unless terminated in accordance with the provisions of Section 16 of “Part 2 Technical Requirements”.

IN WITNESS WHEREOF, the Parties hereto have caused two originals of this agreement to be executed by their duly authorized representatives. This agreement is effective as of the last date set forth below.

Customer:	**City of Haven:**
_____	_____
Signature	Signature
_____	_____
Print Name	Print Name and Title
_____	_____
Date	Date

PART 5. CERTIFICATE OF COMPLETION

Application No. _____

City of Haven
Customer-Owned Renewable Electric Generation Facility

Is the generation facility installed, tested and ready for operation? Yes_____ No _____

Customer: _____ Utility Account Number: _____

Address: _____

Telephone (Day): _____ (Evening): _____

Fax: _____ E-Mail Address: _____

Location of the generation facility (if different from above): _____

Has the generation facility been installed in accordance with all applicable building codes, permits and ordinances (if applicable)? Yes_____ No _____

Electrician/Service Company:

Name: _____

Address: _____ City/State/Zip: _____

Telephone (Day): _____ (Evening): _____

Fax: _____ E-Mail Address: _____

License number: _____

Date electric Utility approved Interconnection Application: _____

Application Number: _____

Inspection:

The generation facility has been installed and inspected in compliance with all applicable electrical codes.

A copy of the signed electrical inspection form is attached. ❑Yes ❑No *(If inspection form is not attached)*

_____ _____

Signature of Inspector: Date:

_____

Printed name of Inspector

Insurance:

The generation facility is covered with an insurance policy as described in the technical requirements, 14 and 15.

A copy of proof of insurance is attached. ❑Yes ❑No

PART 6. APPROVAL TO ENERGIZE GENERATION FACILITY

Application No. _____

City of Haven

Customer-Owned Renewable Electric Generation Facility

The City of Haven, having entered into an Interconnection Agreement for the Generation Facility described in the Application noted by number above and having received a Certificate of Completion with proper documentation of the electrical inspection hereby authorizes the generation facility to be energized:

Electric Utility Signature: _____

Title: _____ Date: _____

PART 7. RENEWABLE ENERGY PARALLEL GENERATION APPLICATION FOR SERVICE

Application No. _____

City of Haven

Customer Name: _____

Service Address: _____

City: _____ State: _____ Zip: _____

Utility Account Number: _____

Contact Person: _____

Telephone Number: _____

Address: _____

City: _____ State: _____ Zip: _____

E-Mail Address: _____

This application is for electric service under the City of Haven ("utility") Renewable Parallel Generation – Residential Service rate schedule or Renewable Parallel Generation – Commercial Service for the above customer ("customer"). The customer generation facility is a renewable energy generation facility as defined in utility Interconnection Standards for Installation and Parallel Operation of Customer-Owned Renewable Electric Generation Facilities 25 kW_{AC} or Less for Residential Service and 200 kW_{AC} or Less for Commercial Service.

The generation facility qualifies for the Renewable Parallel Generation – Residential Service rate or Parallel Generation – Commercial Service rate schedule as it meets the definitions and requirements of said Interconnection Standards. Total rated output of the generation facility under the Renewable Parallel Generation – Residential Service rate schedule, is _____ kW_{AC}. Customer acknowledges that he/she has read the rate schedule and agrees to all terms and conditions contained therein, including without limitation those specified in the Interconnection Standards for Installation and Parallel Operation of Customer-Owned Renewable Electric Generation Facilities 25 kW_{AC} or Less for Residential Service and 200 kW_{AC} or Less for Commercial Service. Specifically, the customer understands and agrees that an electric meter or meters capable of registering the flow of electricity in each direction must be in service at the facility. In addition, and for the purposes of monitoring customer generation and load, the utility may install at its expense, load research metering. The customer shall supply, at no expense to the utility, a suitable location for meters and associated equipment used for billing and for load research. All costs related to installation of said meter or meters shall be borne by the customer. Customer acknowledges and agrees that operation of said generation facility is intended primarily to offset part of customer's electricity requirements, and that the generation facility is not sized to exceed the annual electric energy requirements of the customer's premises. Customer

further acknowledges and agrees that the utility shall not provide credit for surplus energy generated by the generation facility under the Renewable Parallel Generation – Residential Service rate schedule or Renewable Parallel Generation – Commercial Service rate schedule that exceeds the customer's annual energy consumption starting January 1 and ending December 31.

Requested By:

_____
Customer Name

_____
Authorized Signature

_____
Date

Approved By:

_____
Name

_____
Utility Signature

_____
Date

Rejected:

_____
Name

_____
Utility Signature

_____
Reason for Rejection

_____
Date

MEMORANDUM

DATE: February, 2024

To: City of Haven

From: Brooke Carroll, Director of Member Services
James Ging, Director of Engineering Services

Subject: Parallel Generation Interconnection Standards

Purpose of Establishing Standards

The purpose of the Parallel Generation Interconnection Standards is to establish guidelines for eligible residential and commercial customers to interconnect and operate customer-owned inverter-based solar and wind generation facilities with a rated output of 25 kilowatts AC or less for residential service and 200 kilowatts AC or less for commercial service in parallel with the City of Haven's electric distribution system. We find it is beneficial to have a policy in place prior to customer requests.

- Follow Kansas State Statutes
- Ensure Safety of Utility Crews, Customers, and Contractors
- Control Over Installation and Impacts on the Electric Distribution System of the City

Renewable Parallel Generation Interconnection Standards

- Overview of Packet
- Interconnection Application
- Interconnection Agreement
- Certificate of Completion
- Approval to Energize Generating Facility
- Renewable Energy Parallel Generation Application for Service (Optional)

Ordinance Adopting Standards

An ordinance adopting the Interconnection Standards for installation and parallel operation of customer-owned renewable electric generation facilities for residential and commercial has been drafted for review by the City Council if the Interconnection Standards are approved and adopted. It is recommended to have this ordinance reviewed by the city attorney.

Amendment to Electric Rate Resolution

The Interconnection Standards reference the city electric rate resolution in Part 1. We recommend, after review by the city attorney, amending Resolution No. 374 to include Section 7:

Section 7. Interconnection Standards for Customer-Owned Renewable Electric Generation Facilities and Distributed Generation.

(a) There is hereby adopted Interconnection Standards for Installation and Parallel Operation of Customer-Owned Renewable Electric Generation Facilities dated February 5th, 2024.

(b) The adopted Interconnection Standards for Installation and Parallel Operation of Customer-Owned Renewable Electric Generation Facilities dated February 5th, 2024, may be amended, and modified in whole or in part by the Governing Body of the City of Haven, Kansas, as deemed appropriate by the Governing Body.

(c) Distributed generation will be offered on first come first served basis to all customers. In no case shall the City be obligated to purchase an amount greater than four percent (4%) of the utility's peak power requirement for the previous year.

(d) Distributed Generation Customers:

Residential Customers: Any residential customer of the City's electric utility that installs an energy producing system or renewable generator with a capacity of 25 kilowatts or less must first successfully complete and have approved the City of Haven's "Interconnection Standards for Installation and Distribution Operation of Customers-Owned Renewable Electric Generation Facilities."
Commercial Customers: Any commercial customer who wish to install an energy producing system or renewable generator with a capacity of 200 kilowatts or less must first successfully complete and have approved the City of Haven's "Interconnection Standards for Installation and Distribution Operations of Customer-Owned Renewable Electric Generation Facilities."

All distribution generation contracts shall comply with the requirements of K.S.A. 66-1,184 et seq., as amended. The cost of any equipment required to be installed for such attachment or metering and installation shall be the sole responsibility of the customer and such equipment shall not cause damage to the City's electric system or equipment or present an undue hazard to City personnel.

(e) Interconnection Application Fee: Residential and commercial customers are subject to a non-refundable processing fee of $150.00 and must accompany a completed Interconnection Application.

(f) Net Monthly Rate:

Base Rate: Determined by customer class described in Section 1. above.

Energy Rate: Determined by customer class described in Sections 2, 3, 4, and 5 above.

Appropriately sized generators (as defined in K.S.A. 66-1,184) owned by customer-generators will at times either generate more electricity than the customer can consume on premises or only meet a portion or none of the customers electricity needs. During periods of time when the generator owned by the customer-generator cannot provide all the customer's electricity needs, the electricity provided by the electric utility will be billed at the same rate as that established for similar rate class customers that do not own generation. During periods of time when the generator owned by the customer-generator produces electricity in excess of its own needs, and such excess electricity is supplied back to the electric utility, the electric

utility shall compensate the customer for this excess energy at a rate that is 150% of the utility's monthly system average cost of energy per kilowatt hour, per K.S.A. 66-1,184.

The City may, at its discretion, either pay the customer for excess energy at aforementioned rate or calculate such payment and deduct from the customer's bill as a credit.

4% Percent Peak Load Requirement

In accordance with Kansas state statute, the utility may limit the number and size of renewable generators to be connected to the utility's system due to the capacity of the distribution line to which such renewable generator would be connected, and in no case shall the utility be obligated to purchase an amount greater than 4% of such utility's peak power requirements.

In 2022 Haven's peak load was 3,811KW which computes to a 152 KW maximum requirement. The city may allow for an amount greater but is not required by statute.

Billing Calculation Example

Two Meter Readings			
	Meter In - To the Customer (kWh's)		1,000
	Energy Rate Established by Ordinance	$	0.10
	Energy Sold to Customer	**$**	**100.00**
	Meter Out - Customer Generated in Excess of Load (kWh's)		750
	Energy Credit Established by State Statute (1.5 x System Ave Cost)	$	0.06
	Energy Credit to Customer	**$**	**44.46**
	Total Bill to Customer	**$**	**55.54**
Plus Any Established Customer Charge for Rate Class			

TOTAL DEMAND AND ENERGY CHARGE	**$57,971.50**	**$0.09384**
Past Due / (Credit)	$0.00	
Correction for Prior Month Billing	$0.00	
Distribution Facility Charge	$2,760.33	
System average cost of energy in $/kWh	$0.03952000	
TOTAL BILLING THIS PERIOD	**$60,731.83**	

Action Items

1. Consult with city attorney on the documents presented.
2. Review Interconnection Standards and applications.
3. Determine interconnection application fee.
4. Adopt ordinance adopting the Interconnection Standards.
5. Adopt resolution establishing electric rates and new rates and charges relating to renewable energy generation facilities.

	Cust Generated kWh City Received kWh	Cust Received kWh City Delivered kWh	If +, credit If -, bill			
June 2023 Bill	410	107		303		
Current Method						
Meter Fee			$	10.00		
CREDITED for	-303	0.02383	$	(7.22)		
			$	2.78		
New Method					Diff	$ 9.03
Meter Fee			$	10.00		
Energy sold to cust	107	0.1539	$	16.47		
Energy credit	410	-0.035745	$	(14.66)		
			$	11.81		

	Cust Generated kWh City Received kWh	Cust Received kWh City Delivered kWh	If +, credit If -, bill			
April 2023 Bill	281	110		171		
Current Method						
Meter Fee			$	10.00		
CREDITED for	-171	0.03321	$	(5.68)		
			$	4.32		
New Method					Diff	$ 8.61
Meter Fee			$	10.00		
Energy sold to cust	110	0.1539	$	16.93		
Energy credit	281	-0.049815	$	(14.00)		
			$	12.93		

Official Copy #1

City of Haven, Kansas
Public Works Department
Division of Electrical Distribution

Interconnection Standards
For
Parallel Installation and Operation
Of
Customer-Owned Renewable Energy
Electric Generating Facilities
For
The City of Haven, Kansas

TABLE OF CONTENTS

PROGRAM OVERVIEW

1. ELIGIBILITY:
   a. Interconnection to the electric system shall be granted only to new or existing customers, in good standing, under the City's electric service schedules. The Interconnection Agreement shall be between the Customer-Generator and the City and will not include third parties.
   b. The Interconnection Standards are intended for customer-owned generation from Renewable Energy Resources with a rated output of less than 25,000 watts (25 kW). Systems rated for more than 25 kW will be handled under a different process and may involve the local control area and regional transmission organization.

2. REQUEST:
   The Customer shall make a request by completing the attached Appendix A, Application for Interconnection. The City may require additional details or clarifications as needed to properly evaluate the application.

3. SYSTEM EFFECTS:
   The City will analyze the overall impact of the proposed generating facility on the transmission and distribution system. Such analysis will be based on Good Utility Practice to determine thermal effects, voltage ranges, power quality, system stability, etc.

4. SYSTEM UPGRADES:
   As a result of the above analysis, the City will provide the Customer with a cost estimate and projected time frame for any system upgrades that may be necessary to accommodate the generating facility.

5. AGREEMENT:
   Once the Customer and the City have identified mutually agreed on the scope of the overall project including the generating facility, system upgrades and estimated costs, the Customer and the City shall execute the attached document entitled "Interconnection Agreement".

6. CODES AND PERMITS:
   a. The Customer shall be responsible for procuring all building, operating and environmental permits that are required by any Governmental Authority having jurisdiction for the type of generating facility and for the necessary ancillary structures to be installed.
   b. The equipment shall meet the standards listed in the attached document entitled "National Certification Codes and Standards".
   c. The construction and facilities shall meet all local building and electrical codes.

7. NET METERING:
   The Customer shall complete Appendix B, Net Metering Service Schedule documentation to permit the bi-directional flow of electricity and the financial treatment of the net deliveries.

8. CERTIFICATE OF COMPLETION:
Upon completion of the generating facility and prior to normal operation, the Customer shall provide a signed copy of the attached Appendix C, Certificate of Completion.

9. NORMAL OPERATION:
The Customer may begin normal operation of the generating facility upon completion of all documentation and receipt of written approval from the City.

10. DEFINITIONS:
All capitalized terms and phrases throughout this set of standards shall be defined as indicated in the attached Glossary of Terms.

TECHNICAL REQUIREMENTS

1. CHARACTER OF SERVICE:
The electrical service shall be 60 cycle per second alternating current (AC) at supply voltages and number of phases that apply under the City's rate schedules.

2. CODE REQUIREMENTS:
The Generating Facility shall meet all requirements established by the National Electrical Code (NEC), National Electrical Safety Code (NESC), Institute of Electrical and Electronics Engineers (IEEE), and Underwriters Laboratories (UL). Specific codes are listed on the attached document entitled "National Certification Codes and Standards".

3. GENERATING FACILITY PARAMETERS:
The control system of the Generating Facility shall comply with the IEEE specifications and standards for parallel operation with the City, and in particular as follows:
   a. Power output control system shall automatically disconnect from City source upon loss of City voltage and not reconnect until City voltage has been restored by the City.
   b. Power output control system shall automatically disconnect from City source if City voltage fluctuates beyond plus or minus 10% (ten percent).
   c. Power output control system shall automatically disconnect from City if frequency fluctuates plus or minus 2 cycles (Hertz).
   d. Inverter output distortion shall meet IEEE requirements.
   e. The Generating Facility shall meet the applicable IEEE standards concerning impacts to the Distribution System with regard to harmonic distortion, voltage flicker, power factor, direct current injection and electromagnetic interference.

4. FAULT CURRENT CONTRIBUTION
The Generating Facility shall be equipped with protective equipment designed to automatically disconnect during fault current conditions and remain disconnected until the voltage and frequency have stabilized.

5. RECLOSING COORDINATION
The Generating Facility shall be coordinated with the Distribution System reclosing devices by disconnecting from the system during the initial de-energized operation and shall remain disconnected until the voltage and frequency have stabilized.

6. DISCONNECT DEVICE:
A safety disconnect switch shall be installed that is visible to and readily accessible by City personnel. The switch shall be capable of being locked in the open position and shall prevent the generator from supplying power to the distribution system.

INTERCONNECTION AGREEMENT

This Agreement, ("**Agreement**") is entered into by and between the **City of Haven, Kansas** ("**City**"), and _____, ("**Customer**"). Customer and City are referenced in this Agreement collectively as "**Parties**" and individually as "**Party**."

Recitals

WHEREAS, City is a publicly-owned electric utility engaged in the retail sale of electricity in the state of Kansas;

WHEREAS, Customer owns or desires to install, own and operate an electric Generating Facility;

Agreement

NOW, THEREFORE, in consideration of the covenants and promises herein, the Parties mutually agree as follows:

1. SCOPE OF AGREEMENT
   This Agreement governs the terms and conditions under which the Customer's Generating Facility will interconnect with, and operate in parallel with, the City's electrical system.

2. PARALLEL OPERATION
   Customer shall not commence parallel operation of the generating facility until written approval of the interconnection facilities has been given by City. Such approval shall not be unreasonably withheld. City shall have the right to have representatives present at the initial testing of Customer's protective apparatus.

3. INTERCONNECTION COSTS
   The City has estimated the costs, including overheads, for the purchase and construction of necessary System Upgrades to its Distribution System and has provided a detailed itemization of such costs on the attached document entitled "System Upgrade Estimated Costs". The Customer agrees to pay the costs upon receipt of the City's invoice within the timeframe indicated on the invoice.

4. INTERRUPTION OR REDUCTION OF DELIVERIES
   City may require Customer to interrupt or reduce deliveries when the City determines, in its sole discretion, that curtailment, interruption or reduction is necessary because of personnel safety, emergencies, Force Majeure or compliance with Good Utility Practices.

5. ADVERSE OPERATING EFFECTS
   The interconnection of the customer-owned generation shall not reduce the reliability and quality of the Distribution System. This includes, but is not limited to high levels of harmonics, abnormal voltage fluctuations and excessive frequency deviations. The City shall notify the Customer as soon as practicable if, based on Good Utility Practice, operation of the Generating Facility may cause disruption or deterioration of service to other customers served from the same electric system, or if operating the Generating

Facility could cause damage to the City's distribution system. If, after notice, the Customer fails to remedy the adverse operating effect within a reasonable time, the City may disconnect the Generating Facility. The City shall provide the Customer with notice of such disconnection as provided in the City's Service Policies.

6. ACCESS TO PREMISES

City shall have access to the Customer's premises or property as permitted in the Service Policies.

7. INDEMNITY AND LIABILITY

The Parties shall at all times indemnify, defend, and hold the other Party and the directors, officers, employees and agents for said Party, harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party's action or failure to meet its obligations under this Agreement on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnified Party.

8. CONSEQUENTIAL DAMAGES

Other than as expressly provided for in this Agreement, neither Party shall be liable under any provision of this Agreement for any losses, damages, costs or expenses for any special, indirect, incidental, consequential, or punitive damages, including but not limited to loss of profit or revenue, loss of the use of equipment, cost of capital, cost of temporary equipment or services, whether based in whole or in part in contract, in tort, including negligence, strict liability, or any other theory of liability; provided, however, that damages for which a Party may be liable to the other Party under another agreement will not be considered to be special, indirect, incidental, or consequential damages hereunder.

11. INSURANCE

The Customer shall, at its own expense, maintain in force general liability insurance without any exclusion for liabilities related to the interconnection undertaken pursuant to this Agreement. The amount of such insurance shall be sufficient to insure against all reasonably foreseeable direct liabilities given the size and nature of the generating equipment being interconnected, the interconnection itself, and the characteristics of the system to which the interconnection is made. The Customer shall obtain additional insurance only if necessary as a function of owning and operating a generating facility. Such insurance shall be obtained from an insurance provider authorized to do business in the State of Kansas. Certification that such insurance is in effect shall be provided upon request of the City, except that the Customer shall show proof of insurance to the City no later than ten Business Days prior to the anticipated date of normal operation.

12. GOVERNING LAW

This Agreement shall be interpreted and governed under the laws of the State of Kansas. Venue of any action arising hereunder or related to this Agreement shall lie in Reno County, Kansas.

13. DOCUMENTS
The Agreement includes the following documents, which are attached and incorporated by reference:
a. Appendix A, Application For Interconnection,
b. Appendix B, Net Metering service schedule,
c. Appendix C, Certificate of Completion and,
d. Other documents of the City's Interconnection Standards for Parallel Operation and Net Metering of Customer-Owned Electric Generating Facilities.

14. GLOSSARY OF TERMS
Capitalized terms used herein shall have the meanings specified in the attached document entitled "Glossary of Terms".

15. NOTICES
All written notices shall be directed as follows:

CITY: **City of Haven, Kansas**
120 S. Kansas Ave.
Haven, Kansas 67543

CUSTOMER: Name _____
Address _____
City _____

16. TERM OF AGREEMENT
This Agreement shall be in effect when signed by the Customer and City and shall remain in effect thereafter month to month unless terminated by either Party on thirty (30) days prior written notice and in accordance with the Service Policies.

IN WITNESS WHEREOF, the Parties hereto have caused two originals of this Agreement to be executed by their duly authorized representatives.

This Agreement is effective as of the last date set forth below.

(CUSTOMER)	**City of Haven, Kansas**
_____	_____
Signature	Signature
_____	_____
Print Name	Print Name
_____	_____
Title	Title
_____	_____
Date	Date

APPENDIX A, APPLICATION FOR INTERCONNECTION

This Application is considered complete when it provides all applicable and correct information required below. Additional information or clarification to evaluate the Application may be requested by the City.

Processing Fee

A non-refundable processing fee of $50.00 must accompany this Application.

Customer

Name: _____

Contact Person: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone (Day): _____ (Evening): _____

Fax: _____ E-Mail Address: _____

Contact (if different from Customer)

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone (Day): _____ (Evening): _____

Fax: _____ E-Mail Address: _____

Owner of the facility: _____

Generating Facility Information

Location (if different from above): _____

Electric Service Company: _____

Account Number: _____

Inverter Manufacturer: _____

Model _____

Nameplate Rating: (kW) _____ (kVA) _____

(AC Volts) Single Phase _____ Three Phase _____

System Design Capacity: _____ (kW) _____ (kVA)

Prime Mover: Photovoltaic ☐ Reciprocating Engine ☐ Fuel Cell ☐

Turbine ☐ Other _____

Energy Source: Solar ☐ Wind ☐ Hydro ☐ Other (describe) _____

Is the equipment UL1741 Listed? Yes_____ No ___
If Yes, attach manufacturer's cut-sheet showing UL1741 listing

Estimated Installation Date: _____ Estimated In-Service Date: _____

List components of the Small Generating Facility equipment package that are currently certified:

Equipment Type	Certifying Entity
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____

Customer Signature

I hereby certify that, to the best of my knowledge, the information provided in this Application is true. I agree to abide by the terms and conditions of the City's Interconnection Standard and will return the Certificate of Completion when the Generating Facility has been installed.

Signed: _____

Title: _____ Date: _____

Contingent Approval to Interconnect the Generating Facility

Interconnection of the Generating Facility is approved contingent upon the terms and conditions of the City's Interconnection Standard and upon return of the Certificate of Completion.

City Signature: _____

Title: _____ Date: _____

Application ID number: _____

City waives inspection/witness test? Yes___No___

APPENDIX B, NET METERING SERVICE SCHEDULE

ENERGY PRICING AND BILLING
The net electric energy delivered to the customer-generator shall be billed in accordance with the City of Haven's Electric rate schedule, as applicable for the Customer's load characteristics. The electric energy delivered by the Customer-Generator to the City shall be credited in kilowatt-hours (kWh), as described below;

Net electrical energy measurement shall be calculated in the following manner:
(a) For a Customer-Generator, the City shall measure the net electrical energy produced and/or consumed during the billing period either by employing a single appropriate class, bidirectional meter, at no charge, that measures the amount of electrical energy produced and consumed, or by employing multiple meters that separately measure the Customer-Generator's consumption and production of electricity;

(b) If the electricity supplied by the City exceeds the electricity generated by the Customer-Generator during a bulling period, the Customer-Generator shall be billed for the net electricity supplied by the City;

(c) If the electricity generated by the Customer-Generator exceeds the electricity supplied by the City during a billing period, the Customer-Generator shall be charged the minimum monthly bill, and shall be credited at a rate of 100% of the City's monthly system average cost of energy for the excess kWh.

(d) Any excess kWh earned shall only be applied towards energy consumption registered on the meter(s) assigned to the account specified on the Application for Interconnection.

SIZING OF NET METERED FACILITY GENERATION EQUIPMENT
The Net Metering service program is intended to allow a customer to offset a portion or all of the customer's electric energy needs with energy output from a customer-owned and operated Net metering Facility. This program is not intended to provide a means for Customer-Generators to be reimbursed for excess energy produced which exceeds the Customer-Generator's own energy requirements. Therefore, it is important that each prospective Customer-Generator determine the appropriate size of generation equipment required to meet the customer's needs. If requested by the Customer, the City will provide a history of the previous three (3) year's monthly demand and energy profiles, where available, to assist the Customer in sizing generation. Wind and solar resource maps are available at http://www.kcc.state.ks.us/maps/maps.htm which will assist customers and their distributors/installers in the determination of the approximate annual available wind and solar resources at various locations in Kansas. In no case shall the rated capacity of the Net Metered Facility's generation system be sized to exceed the rated capacity of the distribution transformer serving the Net Metered Facility.

SIGNATURE PAGE
I agree to the terms of this Application/Agreement and to operate and maintain the Net Metered Facility in accordance with the manufacturer's recommended practices as well as the City of Haven's interconnection standards applicable to Net Metering. If, at any time, the Net Metered Facility is operating in an abnormal manner, I shall disconnect the Net Metered Facility and not reconnect it to the City's electrical system until cleared to do so by the City.

Customer Generator (print): _____

Customer-Generator (signed): _____ Date:_____

APPENDIX C, CERTIFICATE OF COMPLETION

Is the Generating Facility installed, tested and ready for operation? Yes_____ No _____

Customer: _____

Contact Person:_____

Address: _____

Location of the Generating Facility (if different from above):

_____

City: _____ State: _____ Zip Code: _____

Telephone (Day): _____ (Evening): _____

Fax: _____ E-Mail Address: _____

Electrician/Service Company:

Name: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Day): _____ (Evening): _____

Fax: _____ E-Mail Address: _____

License number: _____

Date Approval to Install Facility granted by the City: _____

Application ID number: _____

Inspection:

The Generating Facility has been installed and inspected in compliance with the local building and electrical codes of the City of Haven, Kansas.

Signed (Local electrical wiring inspector, or attach signed electrical inspection):

_____

Print Name: _____

Date: _____

You are required to send/fax a copy of this form along with a copy of the signed electrical permit to the City in order to receive approval to energize the generating facility.

Public Works Director
City of Haven, Kansas
120 S. Kansas Ave.
Haven, Kansas 67543
FAX 620.465.3617

Approval to Energize the Generating Facility

Energizing the Generating Facility is approved:

City Signature: _____

Title: _____ Date: _____

Glossary of Terms

Applicable Laws and Regulations – All duly promulgated applicable federal, state and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority.

Customer-Generator -- A retail customer of the City of Haven Electric Utility who owns or operates a Net Metered Facility.

Distribution System – The City's facilities and equipment used to transmit electricity to ultimate usage points such as homes and industries directly from nearby generators or from interchanges with higher voltage transmission networks which transport bulk power over longer distances.

Force Majeure – A Force Majeure event shall mean "any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party's control". A Force Majeure event does not include an act of negligence or intentional wrongdoing.

Generating Facility – The Customer's device for the production of electricity identified in the Interconnection Application.

Good Utility Practice – Any of the practices, methods and acts engaged in or approved by a significant portion of the electric industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.

Governmental Authority – Any federal, state, local or other governmental regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include the Customer or any Affiliate thereof.

Interconnection Application – The Customer's request to interconnect a new Generating Facility, or to increase the capacity of, or make a material modification to the operating characteristics of, an existing Generating Facility that is interconnected with the City's electrical system.

Net Metered Facility -- An electricity generation system owned or operated by a Customer-Generator which is located on the Customer-Generator's side of the meter; powered by a Renewable Energy Resource; is located on the premises owned, operated, leased, or otherwise controlled by the Customer-Generator; is interconnected and operates in parallel phase and synchronization the City and is in compliance with the standards established by the City; is intended primarily to offset part of all of the Customer-Generator's own electrical energy requirements; and contains a mechanism, approved by the City, that automatically disables the generation system and interrupts the flow of electricity back onto the City's lines in the event that service to the Customer-Generator is interrupted.

Reasonable Efforts – With respect to an action required to be attempted or taken by a Party under the Interconnection Agreement, efforts that are timely and consistent with Good Utility Practice and are otherwise substantially equivalent to those a Party would use to protect its own interests.

Renewable Energy Resource -- Generation capacity from wind; solar thermal sources; photovoltaic cells and/or panels; or other sources certified as renewable by the Kansas Corporation Commission pursuant to KSA 2009 Supp. 66-1262 and amendments thereto.

System Upgrades – The additions, modifications, and upgrades to the City's Distribution System at or beyond the point of interconnection to facilitate interconnection of the Generating Facility and render the transmission service necessary to effect the Interconnection Customer's wholesale sale of electricity in interstate commerce. Distribution Upgrades do not include Interconnection Facilities.

National Certification Codes and Standards

IEEE1547 Standard for Interconnecting Distributed Resources with Electric Power Systems (including use of IEEE 1547.1 testing protocols to establish conformity)

UL 1741 Inverters, Converters, and Controllers for Use in Independent Power Systems

IEEE Std 929-2000 IEEE Recommended Practice for City Interface of Photovoltaic (PV) Systems

NFPA 70 (2002), National Electrical Code

IEEE Std C37.90.1-1989 (R1994), IEEE Standard Surge Withstand Capability (SWC) Tests for Protective Relays and Relay Systems

IEEE Std C37.90.2 (1995), IEEE Standard Withstand Capability of Relay Systems to Radiated Electromagnetic Interference from Transceivers

IEEE Std C37.108-1989 (R2002), IEEE Guide for the Protection of Network Transformers

IEEE Std C57.12.44-2000, IEEE Standard Requirements for Secondary Network Protectors

IEEE Std C62.41.2-2002, IEEE Recommended Practice on Characterization of Surges in Low Voltage (1000V and Less) AC Power Circuits

IEEE Std C62.45-1992 (R2002), IEEE Recommended Practice on Surge Testing for Equipment Connected to Low-Voltage (1000V and Less) AC Power Circuits

ANSI C84.1-1995 Electric Power Systems and Equipment – Voltage Ratings (60 Hertz)

IEEE Std 100-2000, IEEE Standard Dictionary of Electrical and Electronic Terms
NEMA MG 1-1998, Motors and Small Resources, Revision 3

IEEE Std 519-1992, IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems

NEMA MG 1-2003 (Rev 2004), Motors and Generators, Revision 1

Adopted by the Board of Commissioners/ City Council: 11·3·14 date
Revised: _____ date

(A copy of the Ordinance No. 637 is attached)

ORDINANCE NO. 637

AN ORDINANCE ADOPTING BY REFERENCE "INTERCONNECTION STANDARDS FOR PARALLEL INSTALLATION AND OPERATION OF CUSTOMER-OWNED RENEWABLE ENERGY ELECTRIC GENERATING FACILITIES FOR THE CITY OF HAVEN, KANSAS" FOR THE PURPOSE OF REGULATING THE INSTALLATION AND OPERATION OF CUSTOMER-OWNED RENEWABLE ENERGY ELECTRIC GENERATING FACILITIES; AND PRESCRIBING PENALTIES FOR VIOLATION THEREOF

BE IT ORDAINED BY THE GOVERNING BODY OF THE CITY OF HAVEN, KANSAS:

Section 1. Incorporation by Reference. There is hereby incorporated by reference under the provisions of K.S.A. 12-3009 through 12-3012, including any amendments thereto, for the purpose of regulating the installation and operation of customer-owned renewable energy electric generating facilities within the electrical territory of the City of Haven, Kansas, a certain published compilation of regulations in pamphlet form prepared by the Public Works Department, Division of Electrical Distribution, at the direction of and pursuant to the authority of the City of Haven, Kansas, entitled "INTERCONNECTION STANDARDS FOR PARALLEL INSTALLATION AND OPERATION OF CUSTOMER-OWNED RENEWABLE ENERGY ELECTRIC GENERATING FACILITIES FOR THE CITY OF HAVEN, KANSAS" dated October 31, 2014. No less than three copies of said Interconnection Standards shall be marked or stamped "official copy" as incorporated by Ordinance No. 637, to which shall be attached a copy of this Ordinance and shall be filed with the City Clerk, to be open to inspection and available to the public at reasonable hours. Violations of sections of the "INTERCONNECTION STANDARDS FOR PARALLEL INSTALLATION AND OPERATION OF CUSTOMER-OWNED RENEWABLE ENERGY ELECTRIC GENERATING FACILITIES FOR THE CITY OF HAVEN, KANSAS" shall be cited as Section 1 of this Ordinance, and then the section or article number of said Interconnection Standards violated.

Section 2. Penalties. The owner or agent of generating facilities by which a violation of any provision of this ordinance has been committed or shall exist, or the agent, architect, building contractor or any other person who commits, takes part or assists in any violation or who maintains any generating facilities by which such violation shall exist, shall be guilty of a misdemeanor and shall be punished by a fine not to exceed one thousand dollars. Each and every day that such violation continues may constitute a separate offense.

In case any generating facility is erected, constructed, reconstructed, altered, repaired, converted or maintained, or any equipment is used in violation of this ordinance, the appropriate authorities of the City of Haven, in addition to other remedies, may institute injunction, mandamus or other appropriate action or proceeding to prevent such unlawful erection, construction, reconstruction, alteration, conversion, maintenance or use, or to correct or abate such violation.

Section 3. Validity. If any section, subsection, sentence, clause, or phrase of this Ordinance is for any reason held to be unconstitutional or invalid, such decision shall not affect the validity of the remaining portions of this Ordinance.

Section 4. Conflicting Ordinance Repealed. Any ordinance or parts of ordinances and amendments thereto, in conflict herewith are hereby repealed.

Section 5. This Ordinance shall take effect and be in force from and after its publication twice in the official City newspaper, and that the reproduction of ten copies of the "INTERCONNECTION STANDARDS FOR PARALLEL INSTALLATION AND OPERATION OF CUSTOMER-OWNED RENEWABLE ENERGY ELECTRIC GENERATING FACILITIES FOR THE CITY OF HAVEN, KANSAS", with the adoptive Ordinance No. 637 attached, constitutes due passage of these regulations as provided in K.S.A. 12-3009 through 12-3012.

PASSED AND APPROVED BY THE GOVERNING BODY OF THE CITY OF HAVEN, KANSAS this 3rd day of November, 2014

Paula J. Scott
Mayor

ATTEST:

Dollie Atherton
City Clerk

RESOLUTION NO. 374

A RESOLUTION ESTABLISHING RATE CHARGES FOR ELECTRIC POWER PURSUANT TO ORDINANCE NO. 378 OF THE CITY OF HAVEN, KANSAS

WHEREAS, the Governing Body of the City of Haven, Kansas passed the Ordinance No. 378, authorizing said Governing Body to adjust such rate charges for electric current which shall be at all times sufficient in the aggregate to provide revenues for the payment of all operating costs and charges incidental to the operation by the City of the electric current system; and

WHEREAS, the Governing Body of the City of Haven, Kansas has determined that the following rates provide sufficient revenues to comply with said Ordinance 378;

BE IT THEREFORE RESOLVED:

Section 1. The following customer usage criteria will be used to establish each of the following rate paying classes:

Residential Class - Residential service shall be defined as service to a church or single-phase service to a private house, apartment, flat, or other living quarters occupied by persons constituting a distinct household. It shall include any private garage adjacent to or connected with the residence and used exclusively by the resident.

Commercial Class – Non-residential customers that use less than 50 KW or 4,000 kWh's per month.

Commercial Demand Class – Non-residential customers that use at least 50 KW or 4,000 kWh's per month.

Industrial Demand Class – Non-residential customers that use more than 1,000 KW or 100,000 kWh's per month.

A customer's rate paying class may be adjusted annually based on an annualization of usage at either at the discretion of the City or the request of the customer. A customer request must be initiated by January 15th of each year and not after.

Section 2. The following rates shall be established for the residential customer class;

Minimum Monthly Customer Charge	$10.00
All Energy Usage (kWh's) Charge	$0.1539 per kWh

Section 3. The following rates shall be established for the commercial customer class;

Minimum Monthly Customer Charge	$10.00
All Energy Usage (kWh's) Charge	$0.1491 per kWh

Section 4. The following rates shall be established for the commercial demand customer class;

Minimum Monthly Customer Charge	$10.00
All Energy Usage (kWh's) Charge	$0.1193 per kWh

All Demand (KW) Charge	$7.55 per KW

Section 5. The following rates shall be established for the industrial demand customer class;

Minimum Monthly Customer Charge	$25.00
All Energy Usage (kWh's) Charge	$0.042 per kWh
All Demand (KW) Charge	$8.21 per KW

Section 6. That any Fuel Cost Adjustment or Energy Cost Adjustment assessed to the City from its wholesale supplier may be passed on to all customers at the same rate at which the City is charged. A Power Cost Adjustment may also be passed on to all customers in the event the Governing Body determines such expenses must be recovered to establish a reliable electric utility service to the residents of Haven, Kansas. Such adjustment will be brought before the Governing Body and subject to a majority vote.

PASSED AND APPROVED by the Governing Body of the City of Haven, Kansas this 2nd day of November 2020, effective January 1, 2021.

/s/
Adam Wright, Mayor

ATTEST:

/s/
Leslie Atherton, City Clerk

Ordinance No.

AN ORDINANCE ADOPTING INTERCONNECTION STANDARDS FOR INSTALLATION AND PARALLEL OPERATION OF CUSTOMER-OWNED RENEWABLE ELECTRIC GENERATION FACILITIES FOR RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL CUSTOMERS.

WITNESSETH:

WHEREAS, said Ordinance approved standards and procedures necessary for the health, safety, and welfare of the citizens and city employees for the interconnection of such capacity with the City's electrical system, and

WHEREAS, the governing body finds that new standards and procedures should be adopted;

NOW, THEREFORE, BE IT ORDAINED BY THE GOVERNING BODY OF THE CITY OF HAVEN, KANSAS, AS FOLLOWS:

SECTION 1: There is hereby adopted Interconnection Standards for Installation and Parallel Operation of Customer-Owned Renewable Electric Generation Facilities Dated March 4th, 2024.

SECTION 2: The adopted Interconnection Standards for Installation and Parallel Operation of Customer-Owned Renewable Electric Generation Facilities Dated March 4th, 2024 may be amended and modified in whole or in part by the Governing Body of the City of Haven, Kansas, as deemed appropriate by the Governing Body.

SECTION 3: This Ordinance repeals any other preceding Ordinances.

SECTION 4: This Ordinance shall be effective after it is published in the official city newspaper.

PASSED and **APPROVED** by the Governing Body of the City of Haven, Kansas, on the 4th day of March 2024.

_____
Adam Wright, Mayor

ATTEST:

_____
Josephine Harper, City Clerk

RESOLUTION NO.

AN AMENDMENT TO RESOLUTION NO. 374 ADDING SECTION 7 TO INCLUDE NEW RATES, CHARGES, AND REQUIREMENTS FOR CUSTOMER OWNED RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL RENEWABLE ENERGY GENERATION FACILITIES AND REPEALING ORDINANCE NO. 637

WITNESSETH:

WHEREAS, said Ordinance approved to included updated rates, charges, and requirements for customer owned residential, commercial, and industrial renewable energy generation, and

NOW, THEREFORE, BE IT ORDAINED BY THE GOVERNING BODY OF THE CITY OF HAVEN, KANSAS, AS FOLLOWS:

Section 7. Interconnection Standards for Customer-Owned Renewable Electric Generation Facilities and Distributed Generation.

(a) There is hereby adopted Interconnection Standards for Installation and Parallel Operation of Customer-Owned Renewable Electric Generation Facilities dated March 4th, 2024.

(b) The adopted Interconnection Standards for Installation and Parallel Operation of Customer-Owned Renewable Electric Generation Facilities dated March 4th, 2024, may be amended, and modified in whole or in part by the Governing Body of the City of Haven, Kansas, as deemed appropriate by the Governing Body.

(c) Distributed generation will be offered on first come first served basis to all customers. In no case shall the City be obligated to purchase an amount greater than four percent (4%) of the utility's peak power requirement for the previous year.

(d) <u>Distributed Generation Customers:</u>

Residential Customers: Any residential customer of the City's electric utility that installs an energy producing system or renewable generator with a capacity of 25 kilowatts or less must first successfully complete and have approved the City of Haven's "Interconnection Standards for Installation and Distribution Operation of Customers-Owned Renewable Electric Generation Facilities."
Commercial Customers: Any commercial customer who wish to install an energy producing system or renewable generator with a capacity of 200 kilowatts or less must first successfully complete and have approved the City of Haven's "Interconnection Standards for Installation and Distribution Operations of Customer-Owned Renewable Electric Generation Facilities."

All distribution generation contracts shall comply with the requirements of K.S.A. 66-1,184 et seq., as amended. The cost of any equipment required to be installed for such attachment or metering and installation shall be the sole responsibility of the customer and such equipment shall not cause damage to the City's electric system or equipment or present an undue hazard to City personnel.

(e) Interconnection Application Fee: Residential and commercial customers are subject to a non-refundable processing fee of $150.00 and must accompany a completed Interconnection Application.

(f) Net Monthly Rate:

Base Rate: Determined by customer class described in Section 1. above.

Energy Rate: Determined by customer class described in Sections 2, 3, 4, and 5 above.

Appropriately sized generators (as defined in K.S.A. 66-1,184) owned by customer-generators will at times either generate more electricity than the customer can consume on premises or only meet a portion or none of the customers electricity needs. During periods of time when the generator owned by the customer-generator cannot provide all the customer's electricity needs, the electricity provided by the electric utility will be billed at the same rate as that established for similar rate class customers that do not own generation. During periods of time when the generator owned by the customer-generator produces electricity in excess of its own needs, and such excess electricity is supplied back to the electric utility, the electric utility shall compensate the customer for this excess energy at a rate that is 150% of the utility's monthly system average cost of energy per kilowatt hour, per K.S.A. 66-1,184.

The City may, at its discretion, either pay the customer for excess energy at the aforementioned rate or calculate such payment and deduct from the customer's bill as a credit.

PASSED and **APPROVED** by the Governing Body of the City of Haven, Kansas, on the 4th day of March 2024.

_____
Adam Wright, Mayor

ATTEST:

_____
Josephine Harper, City Clerk

Chad Swartz

From: reply-to+b9160b49-7c58-47d8-a55c-41987815f1a5@email.submittable.com on behalf of Kansas Infrastructure Hub <reply-to+b9160b49-7c58-47d8-a55c-41987815f1a5@email.submittable.com>
Sent: Wednesday, February 28, 2024 4:45 PM
To: Chad Swartz
Subject: Notification of Non-Acceptance:

Submittable

Notification of Non-Acceptance:

The Kansas Corporation Commission (KCC) has notified applicants whose projects were selected to move forward for Department of Energy (DOE) acceptance for this current round of funding. Unfortunately, this project was not one that will move forward to the DOE.

During this first round of funding the KCC received 31 project applications, of which 11 were selected to move forward to the next step.

The KCC has already applied to the DOE for the second round of funding (FY2024) and is awaiting approval and receipt of those funds. Once funds are received from the DOE for this second round a new Notice of Funding Opportunity will be issued and applications will be accepted. DOE has also indicated there will also be a 3rd and 4th round of funding for future fiscal years.

Thank you for participating in this first round of funding. We look forward to reviewing your project again if you decide to re-apply, or apply for another project, for any of the future rounds of funding.

REPLY VIEW SUBMISSION

Submission ID: 45007310

1919 SW BLVD. WICHITA, KS 67213
(316) 945-7227
FAX (316) 945-7799

To:	City Of Haven	**Contact:**	Chad Swartz
Address:	120 South Kansas Ave.	**Phone:**	(620) 465-3618
	Haven, KS 67543	**Fax:**	
Project Name:	Haven Water Tower Crossover	**Bid Number:**	24-047
Project Location:	Water Tower, Haven, KS	**Bid Date:**	2/16/2024

MIES CONSTRUCTION INC. hereby proposes to furnish all material, equipment and labor required to complete the portion in the following proposal.

Line #	Item Description	Estimated Quantity	Unit
1	Mobilization	1.00	LS
2	Pipe, 6" DICL	19.00	LF
3	12" X 6" Tapping Sleeve & Valve	1.00	EACH
4	6" X 6" Tapping Sleeve & Valve	1.00	EACH
5	Waterline Testing	1.00	LS

Total Bid Price: $33,525.00

Notes:

- Due to fuel, material and other rising costs this proposal is valid for 14 days. If the proposal is not accepted within 14 days, additional costs may be incurred Mies Construction will need to reprice this scope of work.
- With the current volatility in material markets, Mies Construction can not be held responsible for project delays due to non-availability of materials.
- The above quoted work is tied unless prior arrangements are made with Mies Construction.
- The above quoted work does not include sales tax. We have not included any bonds nor any other specials or equity fees or other charges that may arise.
- The above proposal is based upon plan sheets dated: 1/8/2024
- **Excluded:**
  Construction Staking, Inspections & As-Builts
  Seeding, Sod or Landscaping
  Tree Trimming / Removal, Relocation or Replacement
  Irrigation Relocation or Repair
  Fence Removal, Resetting or Replacement
  Dirt Work / Easement Grading
  Compaction Testing or Any Other Soils Testing
  Concrete Testing
  Haul Off Excess Dirt & Spoils
  Flowable Fill Backfill of Trenches
  Sawcuts &/or Pavement/Sidewalk Removal or Replacement
  Relocation/Adjustment of Existing Utilities
  Site Demolition
  SWPPP Plan/Inspections, Erosion Control, BMP's or Maintenance of BMP's.
  Liquidated Damages
  Traffic Control &/or Signage (This Includes Removal or Replacement)

Payment Terms:

Project will be billed as a lump sum at the completion of the work and is to be due upon receipt.

ACCEPTED:	CONFIRMED:
The above prices, specifications and conditions are satisfactory and are hereby accepted.	**Mies Construction Inc.**
Buyer: _____	
Signature: _____	**Authorized Signature:** _____
Date of Acceptance: _____	**Estimator:** Jay Johnson (316) 945-7227 jay@miesconstruction.com

Nowak Construction Company, Inc.

200 South Goddard Rd
Goddard, KS 67052

Phone: (316) 794-8898
Fax: (316) 794-2243

To:	City Of Haven	**Contact:**	Harlan Foraker
Address:	120 S. Kansas Ave	**Phone:**	(620) 465-3618
	Haven, KS 67543	**Fax:**	
Project Name:	2024- Haven 6" Crossover WL Pipe At Water Tower	**Bid Number:**	
Project Location:	Water Tower Site Off Haven-Buhler Road, Haven, KS	**Bid Date:**	2/16/2024

Item #	Item Description	Estimated Quantity	Unit	Unit Price	Total Price
1	6" DICL Crossover Pipe Installation	1.00	LS	$23,670.00	$23,670.00

Total Bid Price: $23,670.00

Notes:

- Bond Included - 2 year as required by City of Haven
  Construction Inspection by others
  Construction Staking not required or included within bid
  We will remove anything in our way - haul off by others
  Haul off of excess excavated spoils from site by others
  No fence repair, if required, within bid
  Waterline fittings will be restrained with stargrip/mugalugs with no Thrust Blocking
  Work not listed within bid will be by others
  Materials quoted as import, not domestic for this bid
  Finish grading by others
  Replacement of pavement/sidewalk by others
  95% compaction under pavement/sidewalk is included
  Tap, Equity, or any other fees, permits, or licenses waived by the city
  No Permits Included within bid
  QC/QA Testing by others (Compaction etc.)
  Seeding, or sodding, of disturbed areas by others
  Any special insurance is not included within bid
  Special wage rates are not included within bid
  Sales tax is not included within bid

ACCEPTED:

The above prices, specifications and conditions are satisfactory and are hereby accepted.

Buyer: _____

Signature: _____

Date of Acceptance: _____

CONFIRMED:

Nowak Construction Company, Inc.

Authorized Signature: _____

Estimator: Jeff L. Murphy
316-794-8898 jeff@nowakconstruction.com