

# ELECTRICAL INTERCONNECTION AND POWER EXCHANGE AGREEMENT

THIS AGREEMENT made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_,

by and between Edward Duke, hereinafter referred to as the "Owner"; and the City of Cartersville, a Georgia municipal corporation, hereinafter referred to as the "City".

WHEREAS, the Owner desires to interconnect an eligible distributed generation system to operate in parallel to the City's electric system for production of electric energy intended primarily to offset part or all of the Owner's requirement for electricity; and,

WHEREAS, the City is or will be the electric supplier of the Owner's premises; and,

WHEREAS, the Owner's eligible distributed generation system will be installed at the

Owner's premises located at 49 Westover Road SE, Cartersville Ga 30120; and,

WHEREAS, the Owner's eligible distributed generation system is defined by the State of Georgia as a "Renewable Energy Source" such that energy supplied is from a technology approved in the Georgia Green Pricing Accreditation Program; and,

WHEREAS, the Owner understands the City is not obligated to permit interconnection to or purchase power from distributed generation systems with a peak generating capacity exceeding 10 kW per residential installation or 100 kW per nonresidential installation.

NOW THEREFORE, in consideration of the mutual covenants set forth herein, the parties agree as follows:

## 1. Scope and Purpose

This Agreement describes the conditions under which the City and the Owner agree that the distributed generating facility or facilities may be interconnected to and operated in parallel with the City's electric system and power exchange arrangements. Other services the Owner may require from the City are covered under separate agreements.

The following exhibits are incorporated and made a part of this Agreement:

Exhibit A: Owner's "Application for Interconnection of Distributed Generation Facility" describing in detail the Owner's distributed generation facility, hereinafter referred to as the "System".

Exhibit B: City's "Authorization or Non-Authorization" to connect.

Exhibit C: City's "Distributed Generation Energy Rider".

Exhibit D: City's "Notice of Power Exchange Amount".

## 2. Term and Termination

**2.1** The term of this Agreement begins on the date first set forth above (regardless of the date that the Owner is authorized to interconnect the System pursuant to Section 5 below) and continues until December 31 of the same year then continues for ten (10) successive 1-year terms from January 1 to December 31 unless terminated prior by either party pursuant to the provisions of this Agreement.

**2.2** Either party may terminate this Agreement at any time by providing 90 days written notice to the other party. In the event of a sale of the Owner's premises, then this Agreement will terminate upon that sale.

**2.3** The City may terminate this Agreement at any time for violation of this Agreement upon written notice to the Owner.

**2.4** At the time of termination of this Agreement for any reason, the City reserves the right, but not the obligation, to perform lock out procedures to disconnect the Owner's System from the City's electric system.

## 3. Summary and Description of Owner's System

**3.1** The Owner's System is a self-contained electric generation system including direct current disconnect apparatus, if applicable, alternating current disconnect/lockout, over-current protective device, and all related electrical equipment upstream of the over-current protective device, as set forth on Exhibit A. The System begins and continues up-stream towards the distributed generation from the overcurrent protective device on the Owner's premises. However, the meter socket(s) and related electrical connects are part of the System and are the responsibility of the Owner. The meter(s) is (are) City equipment.

**3.2** The type of Distributed Generation equipment is: Solar.

**3.3** Capacity of the Distributed Generation equipment is: 4.5 kW.

**3.4** The expected annual energy production of the Distributed Generation equipment is: \_\_\_\_\_ kWh.

**3.5** The expected date of initial operation of the Distributed Generation equipment is: 11/3/2023.

## 4. Installation and Permitting

**4.1** The Owner and the System must comply with all applicable National Electric Code (NEC), UL and IEEE requirements, including, but not limited to:

UL 1741-Standard for Static Inverters and Charge Controllers for Use with Photovoltaic Systems.

IEEE Standard 1547 (2003): Standard for Interconnecting Distributed Resources with Electric Power Systems. [NOTE: UL 1741 will soon be incorporated into IEEE 1547].

Other organizations, such as the Canadian Standards Association (CSA), test to UL 1741. If the inverter is tested by an organization other than Underwriters Laboratories, the test data must be submitted to the City.

The Owner at the Owner's expense must: 1) obtain all necessary electrical permits for installation of the System and 2) obtain and maintain any government authorizations or permits required for the operation of the System. The Owner must reimburse the City for any and all losses, damages, claims, penalties, or liability the City incurs as a result of Owner's failure to obtain or to maintain any governmental Authorizations and permits required for construction and operation of the Owner's System.

**4.2** The Owner or its contractor must construct the System as specified in Exhibit A.

**4.3** The Owner must provide a manual, lockable, load-break disconnect switch that provides a "visible air gap" adjacent to the point of connection to the City's electric system to provide a point of electrical separation between the Owner's System and the City's electric system. The City will approve the location of the disconnect switch. The disconnect switch must be easily visible, mounted separately from the metering equipment, readily accessible to the City personnel at all times, permanently labeled "GENERATION DISCONNECT", capable of interrupting the maximum available fault current of System, and capable of being locked in the open position with the City's lock. The City may open the disconnect switch thereby isolating the Owner's System from the City electric system for any reason that the City deems necessary including, but not limited to, maintenance or emergency work, the System adversely affecting other customers of the City, failure of the System to comply with codes/regulations, the System creating hazardous or unsafe conditions, the Owner's failure to pay utility bills when due, and failure to comply with the UL Standards in Section 4.1 above.

The Owner understands the City may accept, but is not obligated to accept, renewable energy credits from the Owner. If Owner anticipates transferring renewable energy credits to the City, the Owner must provide an approved meterbase installed adjacent to the disconnect switch mentioned above suitable for a City meter. City shall own this meter, known as the production meter.

**4.4** The System must meet the following power quality requirements:

**4.4.1. Voltage** – the System must operate within 88 to 110% of nominal voltage. Response to voltages outside this range shall be as follows:

<u>Voltage</u>	<u>Maximum Trip Time</u>
$V < 50\%$	10 cycles
$50\% \leq V < 88\%$	120 cycles
$88\% \leq V \leq 110\%$	normal operation
$110\% < V \leq 120\%$	60 cycles
$V > 120\%$	10 cycles

**4.4.2 Flicker** – The System shall not create objectionable flicker for other City customers. Flicker is considered objectionable when it either causes a modulation of the light level of lamps sufficient to be irritating to humans or causes equipment malfunction.

**4.4.3 Frequency** – The System must have a frequency range of 59.3 to 60.5 Hz. When the interconnected system frequency is outside this range, the System shall trip within 10 cycles.

**4.4.4 Waveform Distortion (Harmonics)** – The System must have low current-distortion levels to ensure that no adverse effects are caused to other equipment connected to the City’s electric system. When the System is serving balanced linear loads, harmonic current injection into the City’s network shall not exceed the following:

Odd harmonics (h):

$h < 11$	$11 \leq h < 17$	$17 \leq h < 23$	$23 \leq h < 35$	$35 \leq h$
4.0%	2.0%	1.5%	0.6%	0.3%

Maximum Total Demand Distortion (TDD) 5.0%

Even harmonics: Even harmonics are to be limited to 25% of the odd harmonics shown above.

**4.4.5 Power Factor** – The System must operate at a power factor  $>0.85$  (leading or lagging) when output is greater than 10% of full load.

**4.4.6 Islanding Protection** – The System must cease to energize the utility line when the inverter is subjected to islanding conditions. The System must immediately, completely, and automatically disconnect from the City’s electric system in the event of a fault on the Owner’s System or loss of source on the City’s electric system. The City, at its own discretion and expense, may conduct periodic testing of anti-islanding. Anti-islanding is a means by which the Owner’s System will cease to generate when it is still connected to the isolated (due to fault clearing or other switching) section of the City’s electric system.

**4.4.7** Isolation Transformer – The City may require a dedicated power transformer between the System and City-owned equipment in order to minimize adverse effects on other City customers.

**4.5** The Owner's over-current protective device (Breaker) at the service panel must be dedicated and must be capable of interrupting the maximum available fault current. The Breaker shall be clearly marked to indicate power source and connection to the City's electric system.

**4.6** The Owner, at the Owner's expense, must pay for any additional equipment required to connect the System to the City's electric system.

## **5. Written Authorization for Connection**

The Owner may not connect the System to the City's electric system until: 1) this Agreement has been fully executed by the parties, 2) the System has been tested, and 3) written authorization to connect the System, in a form substantially similar to Attachment B, has been given to the Owner by the City. The City may have representatives present at the initial testing of the Owner's System and may perform (at its own expense) whatever testing of the Owner's System that the City deems necessary.

After written authorization to connect the System to the City's electric system has been given, the Owner shall make no changes or modifications in the System or of its mode of operation without the prior written approval of the City.

## **6. Warranty**

The City's inspection and approval, if any, of the System is solely for the City's benefit and does not constitute a warranty, express or implied, as to the adequacy, safety, or other characteristics of any structures, equipment, wires, appliances or devices owned, installed or maintained by the Owner or leased by the Owner from third parties, including without limitation the System and any structures, wires, appliances or devices appurtenant thereto.

## **7. Indemnity and Liability**

**7.1** The Owner releases and agrees to indemnify, defend and hold harmless the City, its agents, officers, employees and volunteers from and against all damages, claims, actions, causes of action, demands, judgments, costs, expenses of every kind and nature, predicated upon injury to or death of any person or loss of or damage to any property, arising, in any manner, from the Owner's activities, actions or omissions under this Agreement.

**7.2** Nothing in this Agreement shall be construed as a waiver by the City of any rights, immunities, privileges, monetary limitations to judgments, and defenses available to the City under law.

## **8. Location of System**

The System will be installed in the physical location specified or depicted in Exhibit A. The Owner cannot relocate and connect the System at another premises or physical location without filing a new interconnection application with the City or requesting modifications to this Agreement allowing for connection at the alternate location. In the event that such approval is given, any relocation and installation of the System will be at the Owner's sole expense.

## **9. Access to Premises**

The Owner will provide the City access to the Owner's premises to (i) inspect the Owner's System, (ii) to read and to replace meters, (iii) to open the load-break disconnect switch, and (iv) to disconnect the interconnection facilities at the City's meter or transformer.

## **10. Maintenance of System**

The Owner, at the Owner's sole cost and expense, will maintain the System including, but not limited to, all over-current protective equipment, in a safe and prudent manner and in conformance with all applicable laws, codes and regulation, including, but not limited to, the requirements of Section 4 above. The Owner must retain all records for such maintenance. These records must be available to the City for inspection at all reasonable times.

## **11. Safety**

The Owner agrees to install, operate and maintain the System in a safe and prudent manner and in conformance with all applicable laws, codes and regulations including, but not limited to, those contained in Section 4 above.

## **12. Power Exchange Rate**

The rate at which electrical energy is purchased by the City from the System is described in the "Distributed Generation Energy Rider", attached as Exhibit C, or successor riders as may be approved by the City.

## **13. Power Exchange Amount**

The maximum amount of electrical energy purchased by the City from the System is described in the "Notice of Power Exchange Amount", attached as Exhibit D, or successor notices as may be provided by the City.

For Systems exceeding peak generating capacity of 10 kW per residential installation or 100 kW per nonresidential installation, City may alter the amount of electricity purchased from System or cease purchasing electricity from System by providing ninety (90) days written notice to Owner in a form substantially similar to Attachment D.

## **14. Power Exchange Obligations of City**

The City agrees to:

- a) Purchase excess electricity generated at the Owner's referenced premises, per the City's notice of power exchange amount.
- b) Install appropriate electrical metering that provides for flow of energy both into (from the City) and out of (to the City) the property, such metering to provide a reading of the energy used or supplied during any billing period.
- c) Install appropriate electrical metering (production meter) that provides for flow of energy from System, such metering to provide a reading of the total energy generated, if Owner elects to transfer Renewable Energy Credits.
- d) Bill or make payment to the Owner for the electrical energy consumed or exchanged, per the City's distributed generation energy rider.
- e) The City reserves the right to separate Owner's equipment from the City's lines and facilities if, in the exclusive opinion of the City, continued parallel operation is unsafe or may cause damage to persons or property. Upon such separation, the City shall promptly notify Owner so that any unsafe condition can be corrected.

#### **15. Power Exchange Obligations of Owner**

The Owner agrees and warrants:

- a) That it has full power and authority to execute and deliver this Agreement and all documents contemplated hereunder, and to assure full performance and compliance.
- b) That the Owner will pay for the electrical power exchanged per the City's distributed generation energy rider set forth in Exhibit C or successor riders as may be approved by the City.
- c) That the Owner shall supply the City with appropriate electrical interconnection plans, which must be designed to protect the safety of the City and the general public, and which must be pre-approved by the City. Included in these plans must be the requirement that the customer-owned interconnection equipment must disconnect from the City's electrical system upon the absence of City utility power.
- d) That the Owner agrees to provide the City access to the metering equipment, and agrees to cooperate with the City for any special, temporary metering intended to monitor energy flows.
- e) That the Owner agrees to pay for any incremental City metering or electrical distribution system costs necessitated by this Agreement.
- f) That the Owner will provide, install, own and maintain such power exchange and interconnection equipment that provides for the safe interconnection to the City's system.
- g) That the Owner's installed generation and interconnection equipment will operate safely at the time of installation and throughout the term of the Agreement.
- h) That the Owner will notify the City of any changes to the Owner's system (size change, generation change, or change in interconnection equipment). Technical information on any changes in Owner's equipment must be provided to the City and pre-approval received from the City prior to Owner connection and operation of such equipment.

## **16. Assignment**

This Agreement may not be assigned by the Owner without the prior written consent of the City, which may be withheld in its sole discretion. In the event of a sale of the Owner's premises, then this Agreement will terminate upon that sale. If the new owner desires to continue receiving Service, the new owner must enter into a new, separate agreement with the City.

## **17. Force Majeure**

Neither party will be liable for delays in performing its obligations to the extent that the delay is caused by an unforeseeable condition beyond its reasonable control without fault or negligence, including but not limited to, riots, wars, floods, fires, explosions, acts of nature, acts of government, or labor disturbances.

## **18. Severability**

If any provision of this Agreement is found to be illegal or unenforceable, then the remaining provisions of this Agreement will remain in full force and effect, and such term or provision will be deemed stricken for as long as it remains illegal or unenforceable.

## **19. Governing Law and Venue**

**17.1** Any tribunal enforcing this Agreement shall apply and construe it according to the laws of the State of Georgia.

**17.2** In the event of any dispute over the Agreement's terms and conditions, the exclusive venue and jurisdiction for any litigation, arising there under will be in the Superior Court of Bartow County, Georgia, and, if necessary for exclusive federal questions, the United States District Court for the Northern District of Georgia. The Owner waives any objection to jurisdiction or venue of any action instituted pursuant to this section and may not assert any defense in any such action based on lack of jurisdiction or venue or based upon Forum Non Conveniens. The Owner waives any bond or surety or security upon such bond or surety which, but for this waiver, might be required by the City.

## **20. Survival**

The provisions of this Agreement with respect to indemnification and liability will survive the termination of this Agreement.

## **21. Notices and Other Communications**

Except as otherwise provided in this Agreement or as may be specified by the parties in writing, any notice or other communication required under this Agreement must be in writing and must be sent by registered or certified United States mail, or by messenger, or by facsimile, or by other electronic means. Any such notice or other communication must be addressed as follows and, if so addressed, will be effective upon actual receipt.



**If to Owner:** Company: \_\_\_\_\_  
Contact: Edward Duke  
Title: Home Owner  
Address: 49 Westover Road SE  
Cartersville Ga 30120  
Phone: 714-270-6511  
Fax: \_\_\_\_\_

**If to City:** CITY OF CARTERSVILLE  
ATTN: ELECTRIC DIRECTOR  
P.O. BOX 1390 (if regular mail)  
320 S. ERWIN ST. (if overnight mail)  
CARTERSVILLE, GA 30120  
Phone: 770-387-5631  
Fax: 770-387-5630

**22. Entire Agreement**

This Agreement, together with its attachments, constitutes the entire agreement between the parties and supersedes all previous written or oral communications, understandings and agreements between the parties unless specifically stated otherwise within this Agreement. This Agreement may only be amended by a written agreement signed by both parties. Email and all other electronic (including voice) communications from the City in connection with this Agreement are for informational purposes only. No such communications is intended by the City to constitute either an electronic record or an electronic signature or to constitute any agreement by the City to conduct a transaction by electronic means. Any such intention or agreement is expressly disclaimed.

**23. Acknowledgements Regarding Agreement**

By signing below, the Owner acknowledges understanding of the terms of this Agreement and that the Owner may not connect the System to the City's electric system until the Owner has received written authorization to connect from the City. Within 30 days after notice from the Owner that the System is ready for interconnection to the City's electric system, the City will inspect the System and will provide a written authorization to connect the System or a statement that the System may not be connected because of non-compliance with this Agreement.

**24. Compliance with Ordinances and Regulations**

The Owner shall perform all obligations under this Agreement in strict compliance with all applicable federal, state, and City laws, rules, statutes, charter provisions, ordinances and regulations.

**25. Beneficiaries**

This Agreement is for the sole benefit of and binds the parties, their successors and assigns. This Agreement affords no claim, benefit or right of action to any third party. Any party besides the City or the Owner receiving services or benefits under this Agreement is only an incidental beneficiary.

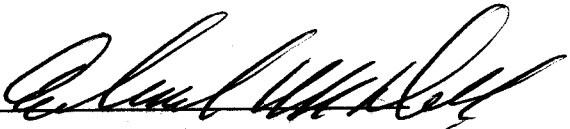
**26. Status of Owner**

The Owner shall perform all operations under this Agreement as an independent Contractor, and not as an agent or employee of the City. No the City official or employee shall supervise the Owner. The Owner will exercise no supervision over any employee or official of the City. The Owner shall not represent that Owner is an employee or agent of the City in any capacity. The Owner has no right to Worker's Compensation benefits from the City or its insurance carriers or funds.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed on the day and year first above written.

WITNESS:

\_\_\_\_\_

  
Owner

By: 

Printed: EDWARD DUKE

Title: HOME OWNER

ATTEST:

\_\_\_\_\_  
City Clerk Julia Drake

CITY OF CARTERSVILLE,  
a Georgia Municipal Corporation

By: \_\_\_\_\_  
Mayor Matthew J. Santini

**Exhibit A**

**APPLICATION FOR INTERCONNECTION  
OF DISTRIBUTED GENERATION FACILITY**

(Attach Owner's "Application for Interconnection of Distributed Generation Facility" describing in detail the Owner's distributed generation facility, the "System".)



# City of Cartersville

E L E C T R I C S Y S T E M

## Application for Interconnection of Distributed Generation Facility

The following application must be completed in its entirety and returned to the City of Cartersville Electric System (CES) at least 30 days prior to the anticipated interconnection date so that ample time is given to process the request. **At no point is the customer permitted to operate their distributed generation facilities in parallel with CES's electric distribution system until written authorization has been received from CES. In addition, applicable permits must be obtained from the City of Cartersville Building Inspections Department prior to installation of the distributed generation and any associated equipment.**

### APPLICATION FEE

Residential Generators:	No charge
Non-residential Generators:	No charge

### DISTRIBUTED GENERATION POLICY

Customers desiring to interconnect and/or sell electrical energy to CES produced by a distributed generation facility must be eligible for participation.

A distributed generation facility must:

1. Be owned and operated by an electrical customer of CES for production of electric energy; and,
2. Be located on the customer's premises; and,
3. Be connected to and operate in parallel with CES's distribution facilities; and,
4. Be intended primarily to offset part or all of the customer's requirement for electricity; and,
5. Be a "Renewable Energy Source" as defined by the State of Georgia such that energy supplied is from a technology approved in the Georgia Green Pricing Accreditation Program.

CES is not obligated to permit interconnection or to purchase energy from a distributed generation facility that does not meet the requirements above or that has a peak generating capacity exceeding 10 kW per residential installation or 100 kW per nonresidential installation in accordance with The Georgia Cogeneration and Distributed Generation Act of 2001. Requests outside the scope of this policy will be evaluated on a case-by-case basis.

CES will only be required to purchase energy from eligible distributed generation facilities on a first-come, first-served basis until the cumulative generating capacity of all renewable energy sources from all customers equals 0.2% of the City's annual peak demand in the previous year. CES may purchase, but is not obligated to purchase, additional energy at a cost agreed to by it and the customer.

### Metering:

CES will install single directional metering or bi-directional metering for an approved distributed generation facility depending on the customer's method of installation. All installed costs for metering and associated equipment will be paid by the customer prior to distributed generation service being initiated. Net metering is not employed by CES.

Bi-directional metering uses one (1) meter to separately measure both the flow of electricity from the utility to the customer and the flow of electricity from the customer to the utility. Bi-directional metering shall be used where distributed generation facilities are connected on the customer's side of the utility meter.

Single directional metering uses two (2) meters and is used where the generation facilities are not located on the customer's side of the utility meter. One meter measures the flow of electricity from the utility to the customer for the non-generating facility and the other meter measures the flow of electricity from the customer to the utility for the generating facility.

**Payment for energy:**

Payment for electricity shall be consistent with The Georgia Cogeneration and Distributed Generation Act of 2001 (OCGA § 46-3-50).

**Bi-directional metering:**

- CES shall own the bi-directional meter. CES shall measure electricity provided to customer and electricity received from customer during the billing period.
- Electricity provided to customer shall be billed in accordance with the standard tariff.
- Customer shall be credited for energy delivered to CES in accordance with the distributed generation energy rider.

**Single directional metering:**

- CES shall own both single directional meters. CES shall measure electricity provided to customer and electricity received from customer during the billing period.
- Electricity provided to customer shall be billed in accordance with the standard tariff.
- Customer shall be billed an administration charge each billing period and credited for energy delivered to CES in accordance with the distributed generation energy rider.

**Application and approval:**

The customer shall be responsible for all costs associated with distributed generation and ensure a safe and reliable interconnection with CES. All fees, metering, engineering, and installation costs must be paid and the following documents must be completed and approved in their entirety prior to interconnection:

- Application for Interconnection of Distributed Generation Facility
- Electrical Interconnection and Power Exchange Agreement
- Electrical Permit

**Power quality requirements:**

Power accepted from customer shall conform to the following power quality requirements:

**Voltage** – The system must operate within 88 to 110% of nominal voltage and must trip off-line in response to voltages outside this range as follows:

V<50%	10 cycles max.
50%≤V<88%	120 cycles max.
88%≤V≤110%	normal operation
110%<V≤120%	60 cycles max.
V>120%	10 cycles max.

**Flicker** – The system shall not create objectionable flicker for other City customers. Flicker is considered objectionable when it either causes a modulation of the light level of lamps sufficient to be irritating to humans or causes equipment malfunction.

**Frequency** – The system must operate within a frequency range of 59.3 to 60.5 Hz. and must trip off-line in response to frequencies outside this range within 10 cycles.

**Waveform Distortion (Harmonics)** – The system must have low current-distortion levels to ensure that no adverse effects are caused to other equipment connected to the City's electric system. When the system is serving balanced linear loads, harmonic current injection into the City's network shall not exceed the following levels:

Odd harmonics (h):

$h < 11$	$11 \leq h < 17$	$17 \leq h < 23$	$23 \leq h < 35$	$h \geq 35$
4.0%	2.0%	1.5%	0.6%	0.3%

Maximum Total Demand Distortion (TDD) 5.0%

Even harmonics: Even harmonics are to be limited to 25% of the odd harmonics shown above.

Power Factor – The system must operate at a power factor  $>0.85$  (leading or lagging) when output is greater than 10% of full load.

Islanding Protection – The system must trip off-line and remain off-line in the event of a fault on the customer's system or loss of source on the City's electric system.

**Physical requirements:**

The customer's over-current protective device at the service panel must be dedicated and must be capable of interrupting the maximum available fault current and shall be clearly marked to indicate power source and connection to the City's electric system.

Customer is required to provide CES a readily accessible solid blade disconnect switch adjacent to the service point on the exterior of the building suitable for a utility lock. As determined by CES, the switch must meet "visible air gap" requirements, be placed at an approved location, be dedicated to utility, permanently marked "GENERATION DISCONNECT", and must be capable of interrupting the maximum available fault current of customer's distributed generation system.

**Renewable energy credits:**

The City may accept, but is not obligated to accept, renewable energy credits from the customer. If customer anticipates transferring renewable energy credits to the City, an approved meterbase must be installed adjacent to the above mentioned disconnect suitable for a City meter (production meter). CES shall own the production meter and CES shall measure electricity produced during the billing cycle.

**Inspection and disconnection:**

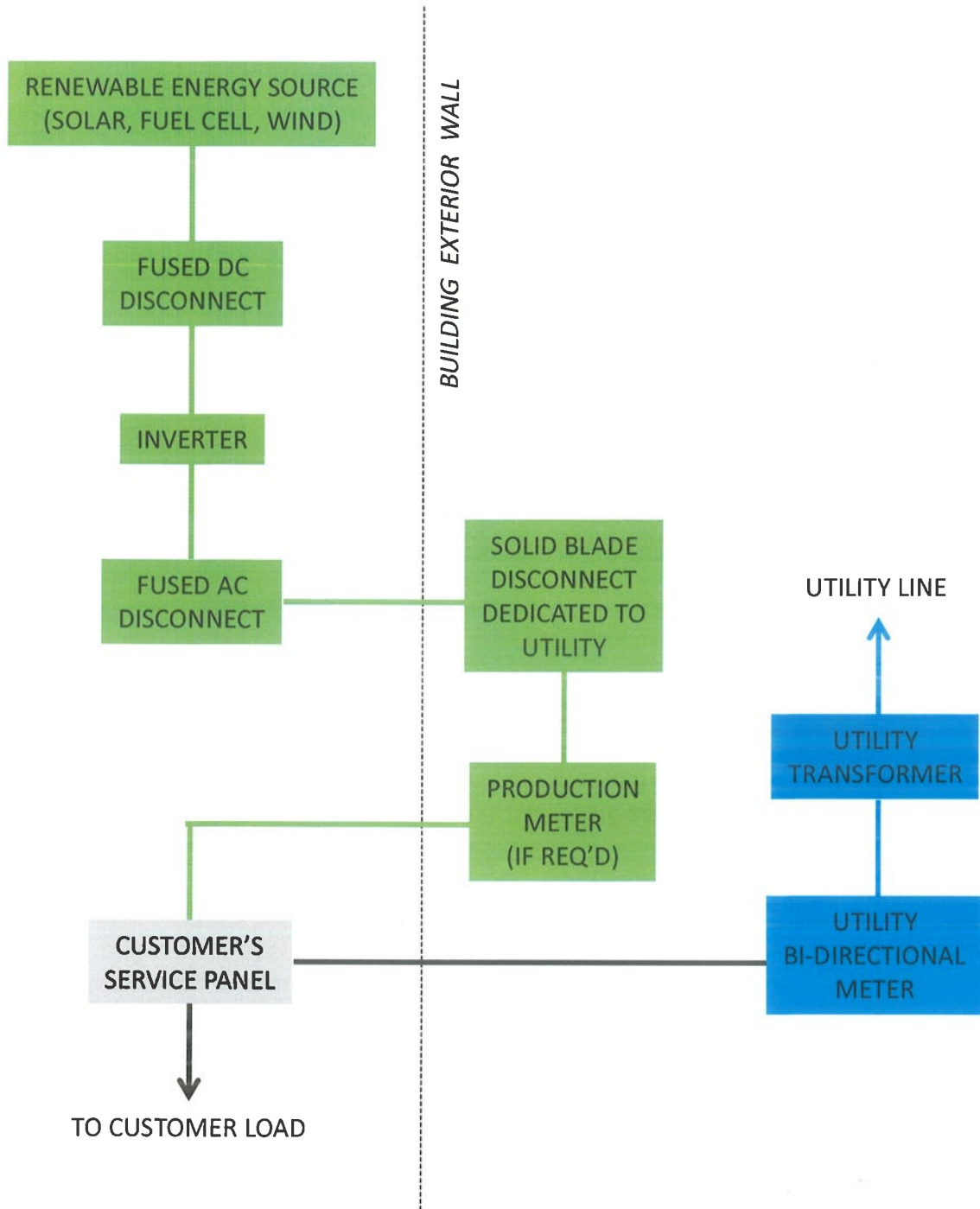
CES reserves the right to inspect and test customer's equipment at any time to ensure proper operation, compliance with safety requirements, or compliance with power quality requirements. CES may separate customer generation from utility system when, as determined by CES, customer system is unsafe or not in compliance.

CES reserves the right to separate customer generation from utility system when, as determined by CES, continued parallel operation with distribution system is unsafe or may cause damage to persons or property or when working on de-energized lines to isolate all sources of generation.

If utility service to customer is disconnected for any reason, distributed generation service will also be disconnected.

CES shall not be liable to any person, directly or indirectly, for loss of property, injury, or death resulting from the interconnection of a cogenerator or distributed generation facility to its electrical system.

# CUSTOMER DISTRIBUTED GENERATION TYPICAL CONNECTION – BI-DIRECTIONAL METERING



**SECTION 1 – APPLICANT CONTACT INFORMATION**

CES Account Number: 5009906198269  
Applicant Contact: Edward Duke  
Applicant Owner/Company: \_\_\_\_\_  
Address: 49 Westover Rd SE, Cartersville, GA 30120  
Phone: 7142706511 Fax: \_\_\_\_\_  
E-mail: harleykid59@gmail.com

**SECTION 2 – GENERATING FACILITY LOCATION**

Address: 49 Westover Rd SE, Cartersville, GA 30120

**SECTION 3 – CONSULTING ENGINEER OR CONTRACTOR CONTACT INFORMATION**

Consultant/Contractor Contact: Todd Jones  
Consultant/Contractor Company: ADT Solar  
Address: 295 Maltbie street, Lawrenceville, GA 30046  
Phone: 4705916641 Fax: \_\_\_\_\_  
E-mail: ToddJones@adt.com

**SECTION 4 – GENERATING FACILITY/INVERTER INFORMATION**

Generator Type: (circle one) Photovoltaic Wind Fuel Cell Hydro Geothermal Other (specify)  
Manufacturer: LG ELECTRONICS  
Model Name and Number: : LG375N1C-A6  
kW Rating: 4.5 kVA Rating: 3.48 Interconnection Voltage: 240v  
Will you supply the necessary var requirements?: (circle one) yes no  
Disconnect Switch Manufacturer/Model Number: Eaton  
Disconnect Switch Rating: 30A THD: \_\_\_\_\_ Max. Fault Current: \_\_\_\_\_  
External Disconnect: (circle one) **yes** no If yes, location: Side of house  
Can the system export power? (circle one) **yes** no Rated Frequency: TBD



**SECTION 5 – RENEWABLE ENERGY CREDITS (REC's)**

Is transfer of REC's to City anticipated? (circle one) **yes** no

External utility production meter: (circle one) **yes** no

**SECTION 6 – ONE-LINE DIAGRAM AND ADDITIONAL INFORMATION**

One-Line Diagram Attached: (circle one) **yes** no Product Literature Attached: (circle one) **yes** no

Obtained Electrical Permit: (circle one) yes **no**

**Note: One-line diagram must include all major equipment including, but not limited to, generators, inverters, circuit breakers, and protective relays.**

**SECTION 7 – EXISTING ELECTRIC SERVICE**

Main Panel Ampere Rating: \_\_\_\_\_ Main Panel Voltage Rating: \_\_\_\_\_

Service Character: (circle one) **Single phase** Three phase

**SECTION 8 – DISTRIBUTED GENERATION INSTALLATION INFORMATION**

Is the normal operation of this generator intended to provide power to meet base load, demand management, standby, back-up, or other? (describe) \_\_\_\_\_

Estimated In-Service Date: TBD Estimated Interconnection Date: TBD

**SECTION 9 – APPLICANT'S CERTIFICATION**

**I, the Applicant, certify that I have read and understand CES's Distributed Generation Policy and that the information provided in this Application is true and accurate to the best of my knowledge.**

Printed Name of Applicant: Edward Duke

Signature:  Date: 8/22/2023

**SECTION 10 – TO BE COMPLETED BY CES PERSONNEL**

CES Contact: JOHN DOOLEY

Phone: 770-387-5631 Fax: \_\_\_\_\_

E-mail: JDOOLEY@CITYOFCARTERSVILLE.ORG

Address: \_\_\_\_\_

Application accepted for review: (circle one) yes no If no, why: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Project Approval: (circle one) Approved Not Approved If not approved, why: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Type customer: (circle one) Residential Non residential

Utility metering: (circle one) Bi-directional Single directional

Production meter: (circle one) Yes No

Renewable Energy Credits: (circle one) Yes No

Fees: Metering: 0

Engineering: 0

Installation: 0

Total Fee: 0

Director's Signature (if approved): [Signature]

Date Interconnection/Power Exchange Agreement forwarded to Applicant: 9/21/2023

Date Interconnection/Power Exchange Agreement received from Applicant: 10/10/2023

Date Interconnection/Power Exchange Agreement approved by Council: \_\_\_\_\_

**Exhibit B**

**AUTHORIZATION or NON-AUTHORIZATION**

This notice is provided to the owner of a distributed generation system detailing authorization or non-authorization to connect to the City of Cartersville’s electric system pursuant to an existing Electrical Interconnection and Power Exchange Agreement.

This notice is an Exhibit B and is hereby made a part of said Agreement superseding any prior Exhibit B.


Name: Edward Duke

Address: 49 Westover Road

.....  
System tested by: Jeromie Hartline

Date: 10/16/2023  
.....

**Section A: Authorization.** The System has been inspected and tested and may be connected to the City’s electric system

Signed by: 

Printed Name: John B. Dooley

Printed Title: Assistant Director

Date: 10/20/2023

**OR**

**Section B: Non-Authorization.** The System cannot be connected to the City’s electric system because the System does not comply with Agreement or does not test properly.

Signed by: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Printed Title: \_\_\_\_\_

Date: \_\_\_\_\_

**Exhibit C**

**DISTRIBUTED GENERATION ENERGY RIDER**

(Attach Distributed Generation Energy Rider)

## DISTRIBUTED GENERATION RIDER, DGR-2

<u>PAGE</u> 1 of 2	<u>EFFECTIVE DATE</u> Bills Rendered on or after July 18, 2019	<u>Page</u> 33.00
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**AVAILABILITY:**

Applicable to Customers in all areas served by the Cartersville Electric System (the Utility) and subject to its service rules, regulations, terms, policies and procedures, as amended from time to time, which are incorporated herein by this reference, and desiring to install a distributed generation facility. Customer account(s) must be in good standing.

A distributed generation facility must:

1. Be owned (or leased) and operated by an existing Customer for production of electric energy, and
2. Be connected to and/or operate in parallel with the Utility’s distribution facilities, and
3. Be intended primarily to offset part or all of the Customer’s generator’s requirement for electricity, and
4. Have peak generating capacity of not more than 10 kW for residential applications and not more than 125% of actual or expected maximum annual peak demand of the premise for commercial applications.
5. Be installed on the customer side of the meter.

**MONTHLY METERING CHARGE:**

<b>Bi-Directional Metering Charge</b> .....	<b>\$2.50 per month</b>
OR	
<b>Single Directional</b>	
<b>Single-Phase</b> .....	<b>\$4.50 per month</b>
<b>Poly-phase</b> .....	<b>\$11.00 per month</b>

The City of Cartersville Electric System will install single directional metering or bi-directional metering depending on the Customer’s method of installation. All installed costs for metering and associated equipment will be paid by the Customer at the time service is initiated under this policy.

Bi-directional metering is defined as measuring the amount of electricity supplied by the Utility and the amount fed back to the Utility by the Customer’s distributed generation facility during the billing period using the same meter. Bi-directional metering shall be used where distributed generation facilities are connected to the Utility on the Customer’s side of the Customer’s meter.

Single directional metering shall be defined as measuring electricity produced or consumed during the billing period, in accordance with normal metering practices. Single directional metering shall be used where distributed generation facilities are connected to the Utility’s distribution system on the Utility’s side of the Customer’s meter.

**Administrative Charges:**

The Utility requires each Customer with a distributed generation facility to pay the monthly administrative charges based on the electric rate.

<b>Residential</b> .....	<b>\$10.00 per month</b>
<b>Commercial Non-Demand</b> .....	<b>\$12.00 per month</b>
<b>Small Power</b> .....	<b>\$14.00 per month</b>
<b>Medium Power</b> .....	<b>\$16.00 per month</b>
<b>Large Power</b> .....	<b>\$18.00 per month</b>
<b>Extra Large Power</b> .....	<b>\$20.00 per month</b>

## DISTRIBUTED GENERATION RIDER, DGR-2 (Continued)

<u>PAGE</u> 2 of 2	<u>EFFECTIVE DATE</u>	<u>Page</u> 34.00
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### PAYMENT FOR ENERGY:

#### Bi-directional metering

1. When electricity supplied by the Utility exceeds electricity generated by the Customer's distributed generation, the electricity shall be billed by the Utility in accordance with the applicable tariff(s).
2. When electricity generated by the Customer's distributed generation system exceeds electricity supplied by the Utility, the Customer shall be billed for the customer charges as described in the standard rate for that billing period and credited for excess kWh generated during the billing period at the Utility's avoided energy cost.

#### Single directional metering

1. For kWh's generated by Customer's distributed generation facility, Customer shall be compensated at the Utility's avoided cost of energy (kWh) as determined by the Utility. The Utility will only compensate Customer for avoided energy kWh's as determined by metered energy delivered to the Utility's distribution system.
2. The Customer's net bill will be calculated using the Utility calculation for avoided energy cost (as described below) credited to the Customer, netted against the billing period charges for the Customer's regular service (according to the applicable tariff) based on actual metered energy.

#### Avoided Energy Cost

Payments by the Utility to the Customer for the billing period metered avoided energy kWh's will be computed by the Utility in its sole discretion based on the average monthly wholesale market price as determined by the Municipal Electric Authority of Georgia (MEAG Power), the Utility's Wholesale Energy provider.

### SAFETY, POWER QUALITY, AND INTERCONNECTION REQUIREMENTS:

The Customer shall be responsible for ensuring a safe and reliable interconnection with the Utility and all costs incurred therein. The Utility has available, upon request, the following documents that must be completed and approved in their entirety prior to interconnection by the Customer to the Utility's distribution system:

1. Application for Interconnection of Distributed Generation Facility
2. Interconnection Agreement
3. Electrical Power Exchange Agreement

The provisions in all documents outlined above are incorporated into this Tariff in their entirety. For the avoidance of doubt, Customer shall be deemed to have agreed to such provisions by applying for service under this Tariff.

The Utility will only be required to purchase energy from eligible distributed generation facilities on a first-come, first-served basis until the cumulative generating capacity of all renewable energy sources from all Customers equals the percentage of the Utility's annual peak demand in the previous year as set forth in O.C.G.A. § 46-3-56(a). Additional energy may be purchased by the Utility at its sole discretion at a cost agreed to by it and the Customer provider. The Utility shall at no time be required to purchase energy from Customers in excess of amounts required by the DG Act.

The Utility reserves the right to separate the Customer generator's equipment from City lines and facilities when, in the Utility's judgment, the continued parallel operation is unsafe or may cause damage to persons or property. Upon such separation, the Utility shall promptly notify the Customer generator so that any unsafe condition can be corrected.