



ALTERNATIVE ENERGY POLICY

EXHIBIT A

For Electrical Customers Installing Alternative Energy Sources

SUMMARY

Customers wishing to install an alternative energy source system including but not limited to, solar, wind, generator, and/or battery must first submit the proposed design to the Utilities Department for review. If approved they must then have an approved City Building permit prior to starting construction and pass an inspection by the City Building Division after construction is completed. A customer wishing to operate an alternative energy generation system must execute an alternative energy agreement with the City, have the system pass a disconnect test witnessed by the City, and have final approval from the City prior to putting the system into service. A customer wishing to operate a renewable generation system as a net metering system must execute an interconnection agreement for net metered renewable generating facilities with the City, have the system pass an interconnection test witnessed by the City, and have final approval from the City prior to paralleling the generation system with the grid.

Grid means the City-owned electrical utility system. An alternative energy generation system (AEGS) is a system that has the capability to generate power on the private side of the customer's meter. A net metering system (NMS) is a system designed to generate electricity from renewable sources and to operate in parallel with the grid. In parallel means that the customer's premises wiring is connected to the NMS and the grid at the same time.

ALTERNATIVE ENERGY REVIEW

Plans must be submitted to the Utilities Department for approval prior to submitting for a building permit with the City Building Division. The plans must be stamped by a Professional Engineer.

BILLING & CREDITS FOR NMS

If during a monthly billing period, the energy supplied by the grid to the customer is more than the energy fed back into the grid by the NMS, the customer will be billed for the difference at a rate normally charged for the type of customer and the amount of energy used. If, on the other hand, the energy supplied is less than the energy fed back, the customer will be credited for the difference at a rate equal to the City's average cost for wholesale electrical energy, defined as excess energy credits. The City's average cost for wholesale electrical energy is calculated on an annual basis when determining excess energy credits.

Excess energy credits can be carried forward to subsequent billing periods. **Excess energy credits have no cash value, credits are non-transferable, and credits may not be used to offset other charges, such as the monthly customer charge.**

NMS ELECTRICAL RATINGS

NMS capacity shall not exceed 80% of the customer's highest yearly usage in the last 3 years. If the capacity includes future additional loads such as a pool or electric vehicle, documentation must be submitted, and the engineering division will consider that request. NMS voltage, frequency, capacity and phasing must be compatible with the grid supply to the premises.

METERING & DISCONNECT EQUIPMENT

All AEGS's must have a disconnect switch, always accessible to City personnel and must be installed as shown in Figures 1 and 2. It must be an appropriately rated load-break switch that can, from outside its enclosure, be checked for open/closed status, be operated, and be padlocked in the open position. There shall not be any devices installed between the revenue meter and the main service entrance conductors tied to the meter clips.

In the case of a net metering system, the City will replace the standard electric revenue meter with a net meter without charge if the existing meter equipment and location meet current codes.

A net meter is designed to measure energy flow either to or from the grid.

*A production meter is a City of Boulder City meter used to measure the full production of the system.
(Non-Billing)*

The disconnect switch and production meter socket must be located within 10 feet of the net meter. All equipment must be tagged as shown in Figures 2 and 3.

BACKUP EQUIPMENT

The operation of Backup Equipment during a loss of Utility power is permitted. The installed equipment must adhere to Boulder City Electrical Infrastructure Requirements Standard Drawing *Meter Material Requirements*.

CONDITIONS OF INSTALLATION

The NMS must meet all applicable safety and power quality standards established by the National Electric Code (especially Articles 685, 690, and 705), Underwriters Laboratories (especially Standard 1741), and the Institute of Electrical and Electronic Engineers (especially Standard 1547). The City must witness the commissioning tests required by these standards. A complete, signed test report must be submitted to the City before it provides final authorization for operation of the NMS in parallel with the grid.

The City Building Division may require a special inspection at customer expense if the NMS was not installed by a Nevada licensed C-2 or C-2g electrical contractor.

Contact the City Building Division for structural, setback, zoning, and other requirements pertaining to the building permit.

Complete final plans shall be stamped and signed by a licensed Professional Engineer in the state of Nevada as required by the City Building Official in accordance with Boulder City Municipal Code.

CONDITIONS OF OPERATION FOR NMS

The operation of the NMS must not reduce the quality of power on the grid or to other electric utility customers. No abnormal voltages, currents, frequencies, or interruptions are permitted.

The NMS must be adjusted so that if it automatically disconnects from the grid due to grid frequency or voltage deviating from the normal range specified in IEEE 1547, the NMS will not attempt to automatically reconnect until grid frequency and voltage are within the normal ranges for at least 60 seconds.

The NMS must never energize a de-energized portion of the grid. If any of the NMS's protective devices which inhibit parallel operation with the grid operate, the customer will not attempt to restore parallel operation with the grid until authorized to do so by the City. If the City determines that the NMS malfunctioned, the Customer must arrange for the problem to be corrected by a certified person and inspected by the City before parallel operation with the grid can be restored.

The customer will ensure that periodic maintenance, inspections, and testing are performed in accordance with manufacturer instructions and the standards listed above. At a minimum, the customer will conduct the periodic interconnection tests described in IEEE Standard 1547 at least once every two years and will notify the City so that it may witness the tests. The customer will maintain records of maintenance, inspections and testing, and make these records available to the City for inspection.

The City may disconnect the NMS or customer service for failure to comply with an installation or operating requirement, or to protect personnel, property, grid reliability, or power quality.

OTHER CONDITIONS

The customer must maintain adequate insurance, and is solely responsible for, and agrees to indemnify the City and its employees against any loss arising from the design, construction, operation, or maintenance of the AEGS. The City does not warrant or assume liability for the AEGS safety, compliance with standards, reliability, durability, or performance arising from its employees conducting or failing to conduct reviews, inspections, testing, witnessing of testing, or approving AEGS documents, equipment, installation, or site.

The customer is fully responsible for protecting the AEGS. A NMS, which is not properly protected, may be damaged by switching operations or disturbances on the grid. The City is not responsible for damage to the NMS.

Refer to "*Alternative Energy Agreement for Alternative Energy Sources*" for additional terms and conditions.

Refer to "*Net Metering Interconnection Agreement for Net Metered Sources*" for additional terms and conditions.

BOULDER CITY CONTACTS

Conservation Specialist: (702) 293-9200

Building Official: (702) 293-9282

Utilities Director: (702) 293-9200

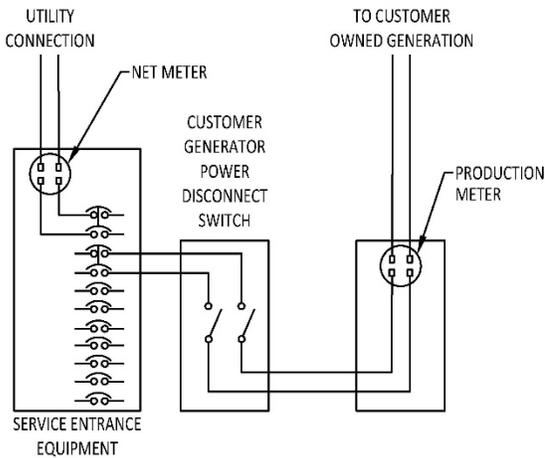


FIGURE 1
METERING ONE-LINE DIAGRAM

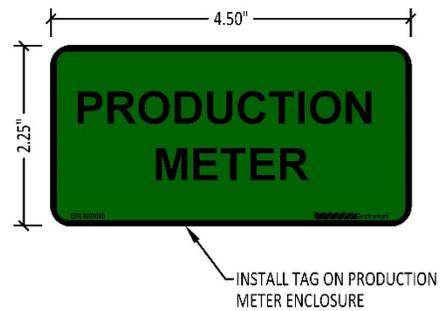
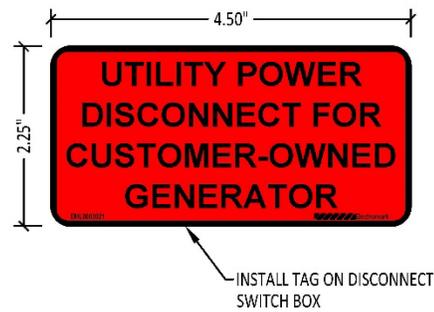
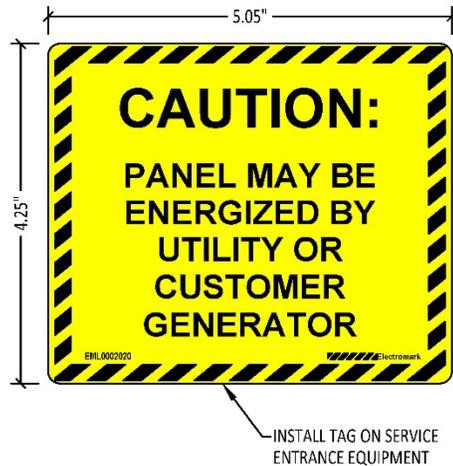


FIGURE 3
REQUIRED TAGGING

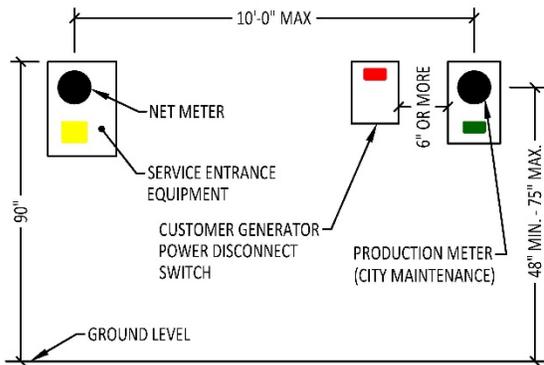


FIGURE 2
METERING ARRANGEMENT



**CITY OF
BOULDER, CO.**
**PUBLIC WORKS
DEPARTMENT**
**ENGINEERING
DIVISION**

ALTERNATIVE ENERGY GENERATION SYSTEMS
EXHIBIT A

FIGURES

CREATED BY:
M. GRIMES
ISSUE DATE:
04/19/22
FILE NAME:
BC-AEGS.dwg
SHEET:

1 OF 1