

**EPHRAIM CITY ORDINANCE
ECO 16-02**

AMENDMENT - EPHRAIM CITY NET METERING ORDINANCE

ENACTING AN AMENDMENT TO ECO 11-01, NET METERING ORDINANCE, ALLOWING FOR ALTERNATIVE ENERGY INTERCONNECTION REGARDING FEES AND REIMBURSEMENT.

PREAMBLE:

WHEREAS, Sections 1-1-1, 1-1-3 and 1-5-5 of the Ephraim City Code empower the City Council with the authority to enact ordinances to regulate, require, prohibit, govern, control or supervise any activity, business, conduct or condition authorized by statute or any other provision of law ; and

WHEREAS, Title 10 Chapter 3 and Section 10-8-84 of the Utah Code Annotated authorizes the City Council to pass ordinances which are reasonably and appropriately related to the objectives of that power, i.e. enact ordinances to regulate, require, prohibit, govern, control or supervise any activity, business, conduct or condition authorized by statute or any other provision of law; and

WHEREAS, based on an ever growing need to protect natural resources there is a growing interest in alternative energy generation on a small scale; and

WHEREAS, various types of technologies may be available on a small scale which may work to the benefit of Ephraim City and its residents; and

WHEREAS, electric energy generation with an interconnection to the Ephraim City distribution system is known as net metering; and

WHEREAS, net metering may be of benefit to various residents of the City if provisions can be implemented to protect the health, safety and welfare of all the residents of the City;

NOW THEREFORE, be it ordained and enacted by the Ephraim City Council as follows:

Section 1. Title for Citation.

The provisions codified in this chapter shall be known and may be referred to as the Ephraim Net Metering Ordinance.

Section 2. Net Metering.

- A. Ephraim City allows customer owned grid connected electric generating systems (net metering) based upon the requirements and standards of this section, provided that the total energy generated by customer owned systems pursuant to this ordinance shall not exceed one percent (1%) of the average total energy load with the City for the three preceding fiscal years. Net metering allows for interconnected non-utility owned electric generation to be connected for parallel operation with the electrical system of Ephraim City Power.
- B. Net metering will be allowed to interconnect with Ephraim Power's electrical distribution system at a service level voltage only after determination by Ephraim City Power that such interconnection

will not interfere with the operation of the distribution circuit and ensures the safety of Ephraim City Power employees and customers.

C. Interconnection Requirements

1. Customer shall comply with all the latest applicable National Electric Code (NEC) requirements [NEC Articles 690 and 705], National Electric Safety Code (NESC) requirements, State of Utah requirements, building codes, and shall obtain building permit(s) for the equipment installation.
2. Meter and transformer or transformer pole serving the Customer-Generator shall be labeled to indicate potential electric current back feed. Ephraim City Power will provide and install labels when Customer-Generator's electric system is approved for interconnection.
3. Customer shall provide space for metering equipment and meter base as per Ephraim City Power requirements.
4. Customer's over-current device at the service panel must be marked to indicate power source and connection to Ephraim City Power's distribution system.
5. The Customer shall assume the full responsibility for all maintenance of the generator and protective equipment and keeping of records for such maintenance. These records shall be available to Ephraim City Power for inspection at all times.
6. Customer's power production control system shall comply with NEC Articles 690 and 705; and applicable and current Institute of Electrical and Electronics Engineers (IEEE) Standards including Standard number 1547 "Interconnecting Distributed Resources with Electric Power Systems" for parallel operation with Ephraim City Power; in particular the following:
 - a. Power output control system shall automatically disconnect from Ephraim City Power source upon loss of voltage and not reconnect until Ephraim City Power's voltage has been restored for at least five (5) minutes continuously.
 - b. Power output control system shall automatically initiate a disconnect from the Ephraim City Power source within six (6) cycles if Customer's voltage falls below 60 Volts rms to ground (nominal 120 V rms base) on any phase.
 - c. Power output control system shall automatically initiate a disconnect from Ephraim City Power's system within two (2) seconds if the voltage rises above 132 Volts rms phase to ground or falls below 104 Volts rms phase to ground (nominal 120 V rms base) on any phase.
 - d. Power output control system shall automatically initiate a disconnect from Ephraim City Power's system within three (3) cycles for any reverse power flow condition.
7. Customer shall provide a written description of how the protection devices will achieve compliance with the requirements of this policy as part of the Building Permit Application.

8. Customer shall furnish and install on customer's side of the meter, a UL-approved safety disconnect switch which shall be capable of fully disconnecting the Customer's generating facility from Ephraim City Power's electric system. The disconnect switch shall be located adjacent to Ephraim City Power's meters and shall be of the visible break type in a metal enclosure which can be secured by a padlock. The disconnect switch shall be accessible to Ephraim City Power personnel at all times.
 9. Additional Metering: For purposes of gathering research data, Ephraim City Power may, at its own expense, install and operate additional metering and data-gathering devices.
 10. Solar Photovoltaic Equipment shall be in compliance with Underwriters Laboratories (UL) 1741, *Standard for Static Inverters and Charge Controllers for Use in Photovoltaic Systems*, UL 1703, *Standard for Safety: Flat-Plate Photovoltaic Modules and Panels*; and *IEEE 1262-1995, Recommended Practice for Qualification of Photovoltaic (PV) Modules*; and the solar system shall be installed in compliance with IEEE Standard 929-2000, *Recommended Practice for Utility Interface of Photovoltaic Systems*.
 11. Wind turbines shall meet the requirements of the Ephraim City Municipal Code.
- D. Safety: All safety and operating procedures for joint use equipment shall be in compliance with the Occupational Safety and Health Administration (OSHA) standard 29 CFR 1910.269, the NEC, the NESC, State of Utah rules, City standards, and equipment manufacture's safety and operating manuals.
- E. Guidelines for System Diagrams:
1. A system diagram or schematic must be submitted with a building permit application. The required system diagram is used by Ephraim City Power during the review and approval process, and again during field testing and meter installation. The diagram is a permanent record copy of the system and is filed at Ephraim City Power for reference. Discrepancies between the diagram and the actual installation as built are cause for rejection at the final testing and net meter installation.
 2. The system diagram can be anything from One-Line, to a schematic, to a complete wiring diagram that shows every wire and every connection throughout. Any of these are acceptable as long as the minimum key information is included. Ephraim City Power has the discretion to reject the diagram submitted and require a specified format. The diagram does not need to be overly complex, but accuracy and clarity are critical (*Some systems have more complex requirements for interconnection and will require much more significant design drawings for review and approval.*)
 3. At a minimum, the system diagram must show how the components of the customer generator system are connected electrically. Additional information, such as equipment part numbers and physical locations, should also be included on the diagram. Some of this additional information may be contained in the application forms as well, but documenting it on the system diagram provides a single complete reference for the project and speeds the engineering reviews and field work.
 4. The System Diagram should provide the information as described below:

- a. Generator (PV Panels, Wind Turbine, Hydro Turbine, etc.): Include manufacturer, part number, nameplate maximum capacity (kW), and physical location. For modular systems (e.g. pv panels), also include: number of modules, configuration, nameplate maximum capacity of each module, and total nameplate maximum capacity.
- b. Inverter: Include manufacturer, type or series, part number, serial number, nameplate maximum capacity (kW), output voltage, physical location.
- c. Disconnect Switch: Include the physical location relative to the Ephraim city Power service meter.
- d. Electrical Service Panel: Include the panel or main breaker size and the position at which the generation is connected. Show all panels (if there are multiple panels or subpanels) even if not directly connected into the generation system.
- e. Ephraim City Power Service Meter: Include existing meter serial number, meter form, and class.
- f. Other related equipment (battery banks, transfer or bypass switches, backup generators, etc.).

F. License Approval:

1. Each customer desiring to engage in net metering must enter into a net metering license agreement as prepared by Ephraim City Power. The license agreement will contain additional conditions to maintain the integrity and reliability of the Ephraim City power system and/or conditions deemed necessary to maintain the health, safety, and welfare of the residents and employees of the City
2. The license agreement application shall be accompanied by the design or schematic required by this section, together with a filing fee as established by resolution of the Ephraim City Council in the Consolidated Fee Schedule. Adjustments to the amount of the fee may be made by the City Council in the annual budget, or by resolution.
3. The license may be revoked for violations of any of the terms of the license agreement or for the violation of any of the terms of this section.

G. Fees and Reimbursement:

1. All Net Metering customers will be charged a monthly interconnection fee as established by resolution of the Ephraim City Council.
2. Reimbursement rates will periodically be reviewed and/or changed at the discretion of the Council.

H. Temporary Connections: This section shall not apply to the temporary generation of the electric energy for emergency or standby purposes, except as noted below:

1. All emergency or standby generation shall not be interconnected with Ephraim City Power's system at any time. A positive, physical means of transferring and separating

loads between normal and alternate sources of supply must be used to prevent inadvertent interconnection.

2. All emergency or standby generation shall comply with the provisions of the latest revisions of the National Electric Code and National Electric Safety Code.

Passed by the Ephraim City Council this 15th day of June, 2016 and will become effective upon publication.

MAYOR:

Richard Squire

ATTEST:

Leigh Ann Warnock

COUNCIL VOTE

John Scott	Aye ___	Nay ___
Alma Lund	Aye ___	Nay ___
Richard Wheeler	Aye ___	Nay ___
Margie Anderson	Aye ___	Nay ___
Tyler Alder	Aye ___	Nay ___