

ORDINANCE NO. 21611

Roll Call

VOTING	YES	NO
JONATHAN F. COPE, Mayor (votes only in case of tie)		
LYNN DURRANT City Council person	<i>LD</i>	
TERRY A. FICKLIN City Council person		
TODD R. GORDON City Council person		
SIDNEY M. JORGENSEN City Council person	<i>SMJ</i>	
STERLING M. REES City Council person	<i>SMR</i>	

I MOVE this ordinance be adopted: Council person *Lynn Durrant*

I SECOND the foregoing motion: Council person *Sterling M. Rees*

ORDINANCE No. 21611

AN ORDINANCE ALLOWING FOR ALTERNATIVE ENERGY INTERCONNECTION

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 Salem City and its residents; and

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

WHEREAS, the City has not been able to allow net metering due to the bonding requirements of its energy supplier, Utah Municipal Power Agency (UMPA); and

WHEREAS, UMPA has now resolved its bonding issues concerning net metering, which will allow for the same to be able to take place within the City, but UMPA has limited the amount of total energy generated from net metering to one percent (1%) of the average energy load within the City for the three prior fiscal years; 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 Salem City Council as follows:

I.

Salem Municipal Code Section 11-1-090 "Net Metering" is hereby created as follows:

11-1-090. Net Metering.

- A. Salem 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 within 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 Salem City.
- B. Net metering will be allowed to interconnect with Salem City's electrical distribution system at a service level voltage only after determination by Salem City that such interconnection will not interfere with the operation of the distribution circuit and ensures the safety of Salem City 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 Electrical 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 by Salem City to indicate potential electric current back feed. Customer will provide labels to be installed when Customer-Generator's electric system is approved for interconnection.

3. Customer shall provide space for metering equipment and meter base as per Salem City requirements.

4. Customer's over-current device at the service panel shall be marked to indicate power source and connection to Salem City's electric 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 Salem City 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 Salem City; in particular the following:

- a. Power output control system shall automatically disconnect from Salem City's source upon loss of voltage and not reconnect until Salem Power's voltage has been restored for at least five (5) minutes continuously.
- b. Power output control system shall automatically initiate a disconnect from Salem City's 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 Salem City's electrical 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 Salem City's

electrical 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 Salem City's electric system. The disconnect switch shall be located adjacent to Salem City'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 Salem City personnel at all times.

9. Additional Metering: For purposes of gathering research data, Salem City may, at its 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 Salem City Zoning 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 manufacturer's safety and operating manuals.

E. Guidelines For System Diagrams

A system diagram or schematic must be submitted with a building permit application. The required System Diagram is one of the most important parts of the application for interconnection. The system diagram is used by Salem City 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 Salem City for reference.

Discrepancies between the diagram and the actual installation as built are cause for rejection at the final testing and net meter installation.

The System Diagram can be anything from a 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. Salem 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. 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.

Some systems have more complex requirements for interconnection and will require much more significant design drawings for review and approval.

The System Diagram should provide the information as described below:

- i. 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.
- ii. Inverter - Include manufacturer, type or series, part number, serial number, nameplate maximum capacity (kW), output voltage, physical location.

- iii. Disconnect Switch - Include the physical location relative to the Salem Power Service Meter.
- iv. 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.
- v. Salem Power Service Meter - Include existing meter serial number, meter form, and class.
- vi. 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 Salem City. The license agreement will contain additional conditions to maintain the integrity and reliability of the Salem City electrical 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 in the amount of \$500.00. 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 violation of any of the terms of this section.

G. Temporary Connections

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

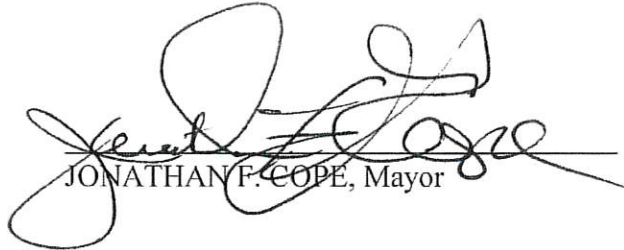
1. All emergency or standby generation shall not be interconnected with Salem City's electrical system at any time. A positive, physical means of transferring and separating loads between normal and alternate sources of supply must be used to prevent inadvertent interconnection.

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


II.

This Ordinance shall take effect 20 days after passage and publication.

PASSED AND ORDERED PUBLISHED BY THE SALEM CITY, UTAH COUNCIL this 16 day of February, 2011.


JONATHAN F. COPE, Mayor

Attest:


Jeffrey D. Nielson, City Recorder

AFFIDAVIT OF POSTING

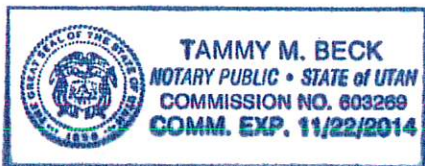
JEFFREY D. NIELSON, being first duly sworn, deposes and says that he is the duly appointed and qualified recorder of Salem City, a Municipal Corporation of the State of Utah, and that on the 3 day of March, 2011, he posted a true and correct copy of Ordinance No. 21611 as enacted by Salem City Council on the 16th day of February, 2011, said posting being made at the City Offices, at the United States Post Office, and at the City Library all being public places and located within the City Limits of Salem, Utah County, Utah.

DATED this 3 day of March, 2011.


JEFFREY D. NIELSON, City Recorder

STATE OF UTAH)
 : ss
COUNTY OF UTAH)

The foregoing instrument was acknowledged before me this 3rd day of March, 2011, by Jeffrey D. Nielson.




NOTARY PUBLIC