



**CITY OF LODI
COUNCIL COMMUNICATION**

AGENDA TITLE: Adopt resolution amending Lodi Electric Utility Department's rules to parallel the California Public Utilities Commission's rules concerning the amount of liability insurance required for small electrical generators that are interconnected with Lodi's system (EUD)

MEETING DATE: June 21, 2006

PREPARED BY: Electric Utility Director

RECOMMENDED ACTION: That the City Council adopt a resolution amending Lodi Electric Utility Department's rules to parallel the California Public Utilities Commission's rules concerning the amount of liability insurance required for small electrical generators that are interconnected with Lodi's system.

BACKGROUND INFORMATION: In March 1989, in the interest of uniform understanding and application, the City Council adopted Resolution 1447 formalizing the rules and regulations by which electric service is furnished. Periodic reviews are made to ensure the rules and regulations are still pertinent.

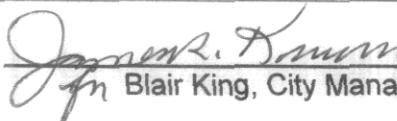
EUD's Rule 21 governs the interconnection and parallel operation of non-city-owned cogenerations and small power producers, which are normally referred to as Qualifying Facilities. Rule 21 defines the cost responsibility, liability insurance, power equipment and appurtenances, metering and operating requirements, and other conditions that may be necessary to interconnect a generating facility. Specifically, EUD allows interconnection and operation of non-City-owned generating facilities with needed liability insurance coverage of \$5,000,000 according to existing Rule & Regulation No. 21 section C.2. The insurance requirement seems excessive and prohibitive for small generators like small solar photovoltaic (PV) and wind.

For purposes of establishing reasonable insurance coverage for small generating facilities, staff reviewed the interconnection agreements and procedures of other electric utilities including federal and state agencies as shown in Exhibit 1. EUD recommends amending Rule & Regulation No. 21, Section C.2 to conform to the California Public Utilities Commission Decision No. 00-12-037 with the following liability insurance coverage for small generating facilities:

1. Greater than 100kW = \$2,000,000 per occurrence
2. Greater than 20kW and less than or equal to 100kW = \$1,000,000 per occurrence
3. 20kW or less = \$500,000 per occurrence
4. 10kW or less connected to residential customer = \$200,000 per occurrence

A modified copy of Rule & Regulation No. 21 is shown as Attachment A. The EUD would like to implement these changes after City Council's approval to become effective July 1, 2006.

APPROVED:


Blair King, City Manager

Adopt resolution amending Lodi Electric Utility Department's rules to parallel the California Public Utilities Commission's rules concerning the amount of liability insurance required for small electrical generators that are interconnected with Lodi's system (EUD)

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For relative information, a Qualifying Facility (QFs) is a generating facility which meets the requirements under Public Utility Regulatory Policies Act (PURPA) of 1978 and Part 292 of the Commission's Regulations (18 CFR Pat 292). There are two types of QFs: cogeneration facilities and small power production facilities. A Cogeneration Facility is a generating facility that sequentially produces electricity and another form of useful thermal energy (heat or steam).

A Small Power Production Facility is a generating facility whose primary energy source is renewable (hydro, wind, solar, etc.), biomass, waste, or geothermal resources.

FISCAL IMPACT: None to insignificant impact on bulk power demand.

FUNDING AVAILABLE: Not applicable.



Ruby Paiste, Interim Finance Director



George F. Morrow
Electric Utility Director

PREPARED BY: Demy Bucaneg, Jr., P.E., Sr. Power Engineer

GFM/DB/sh
Attachments
cc: City Attorney

Exhibit 1

Comparison of Insurance Provisions

Facility: Small Generating Facility & QF

General Liability Insurance with:	PG&E	SCE	MISO	CPUC D0012037	IREC	FERC/MPUC	Lodi Electric Utility	
							Existing	Proposed
Generic Small Generator					\$2,000,000.00			
10kW or Less (Residential)	\$ 200,000.00	\$ 200,000.00		\$ 200,000.00		No Insurance	\$5,000,000.00	\$ 200,000.00
20kW or Less	\$ 500,000.00	\$ 500,000.00		\$ 500,000.00				\$ 500,000.00
Greater Than 10kW & Less Than or Equal to 100kW						\$ 500,000.00	\$5,000,000.00	
Greater Than 20kW & Less Than or Equal to 100kW	\$1,000,000.00	\$1,000,000.00		\$ 1,000,000.00				\$1,000,000.00
Greater Than 100kW	\$2,000,000.00	\$2,000,000.00		\$ 2,000,000.00			\$5,000,000.00	\$2,000,000.00
Greater Than 100kW & Less Than or Equal to 1MW						\$1,000,000.00		
Greater Than 1MW & Less Than or Equal to 5MW						\$2,000,000.00		
2MW or less			\$ 5,000,000.00					
Greater Than 5MW						\$5,000,000.00		
Greater Than 2MW & Less Than or Equal to 20MW			\$10,000,000.00					

RESOLUTION NO. 2006-120

A RESOLUTION OF THE LODI CITY COUNCIL AMENDING THE
LODI ELECTRIC UTILITY DEPARTMENT RULES TO PARALLEL
THE CALIFORNIA PUBLIC UTILITIES COMMISSION RULES
RELATING TO THE AMOUNT OF LIABILITY INSURANCE
REQUIRED FOR SMALL ELECTRICAL GENERATORS THAT
ARE INTERCONNECTED WITH LODI'S SYSTEM

WHEREAS, on March 22, 1989, the City Council adopted Resolution No. 89-29 formalizing the Rules and Regulations by which electric service is furnished; and

WHEREAS, amendments to the Electric Utility Department Rules and Regulations are necessary from time to time; and

WHEREAS, the Electric Utility Department's Rule 21 governs the interconnection and parallel operation of non-City-owned cogenerations and small power producers, which are normally referred to as Qualifying Facilities (Exhibit A); and

WHEREAS, the Electric Utility Department's Rule 21 defines the cost responsibility, liability insurance, power equipment and appurtenances, metering and operating requirements, and other conditions that may be necessary to interconnect a generating facility; and

WHEREAS, the Electric Utility Department allows interconnection and operation of non-City-owned generating facilities with needed liability insurance coverage of \$5,000,000 according to existing Rule & Regulation No. 21 section C.2; and

WHEREAS, the insurance requirement seems excessive and prohibitive for small generators like small solar photovoltaic (PV) and wind; and

WHEREAS, for purposes of establishing a reasonable insurance coverage for small generating facilities, staff reviewed the interconnection agreements and procedures of other electric utilities including federal and state agencies as shown in Exhibit B; and

WHEREAS, EUD recommends amending Rule & Regulation No. 21, Section C.2 to conform to the California Public Utilities Commission Decision No. 00-12-037 with the following liability insurance coverage for small generating facilities:

1. Greater than 100kW = \$2,000,000 per occurrence
2. Greater than 20kW and less than or equal to 100kW = \$1,000,000 per occurrence
3. 20kW or less = \$500,000 per occurrence
4. 10kW or less connected to residential customer = \$200,000 per occurrence

NOW, THEREFORE, BE IT RESOLVED that the Lodi City Council hereby amends Electric Utility Department Rules to parallel the California Public Utilities Commission's rules concerning the amount of liability insurance required for qualifying small electrical generators that are interconnected with Lodi's system, to become effective July 1, 2006.

Dated: June 21, 2006

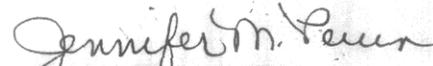
I hereby certify that Resolution No. 2006-120 was passed and adopted by the City Council of the City of Lodi in a regular meeting held June 21, 2006, by the following vote:

AYES: COUNCIL MEMBERS – Beckman, Hansen, Johnson, Mounce,
and Mayor Hitchcock

NOES: COUNCIL MEMBERS – None

ABSENT: COUNCIL MEMBERS – None

ABSTAIN: COUNCIL MEMBERS – None


JENNIFER M. PERRIN
Interim City Clerk



CITY OF LODI

ELECTRIC UTILITY DEPARTMENT

EXHIBIT A

RULE AND REGULATION NO. 21

NON-CITY-OWNED PARALLEL GENERATION

A. General

1. The City will interconnect and operate in parallel with co-generators and small power producers as defined in the Federal Energy Regulatory Commission (FERC) Order No.70. Such facilities shall be termed "Qualifying Facilities (QF)."
2. The City has the option of purchasing the power output of such QF or providing facilities and services to allow sale to an adjacent utility with whom the owner of the QF has made prior contractual arrangements for receiving of such power.
3. Nothing in these Rules shall limit the City's ability to evaluate each QF and determine terms and conditions that are mutually satisfactory to all parties and insure safe and effective operation without adverse effects on other customers and City equipment or personnel.

B. Interconnection Costs

1. All costs incurred by the City for interconnection with the QF must be borne by the QF.
2. The QF shall pay all monthly costs incurred by the City and directly associated with having the QF connected to its system, i.e. communication, administration, etc.
3. If the City agrees to provide the means for a QF to sell its power to an adjacent utility, the QF shall pay the facility charge (wheeling cost) periodically to the City for the cost of providing the facilities to sell to an adjacent utility.

C. Liability

1. The QF shall defend, indemnify and hold harmless the City from any and all liability arising from the operation and interconnection of the QF. The QF shall bear full responsibility for the installation and safe operation of the equipment required to generate and deliver energy to the point of interconnection.



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2. The QF shall maintain Worker's Compensation Insurance as required by law.
3. The QF shall maintain Public Liability Insurance covering bodily injury and property damage with a combined single limit of not less than:
 - a. Two million dollars (\$2,000,000) for each occurrence if the Gross Nameplate Rating of the generating facility is greater than one hundred (100) kW;
 - b. One million dollars (\$1,000,000) for each occurrence if the Gross Nameplate Rating of the generating facility is greater than twenty (20) kW and less than or equal to one hundred (100) kW; and
 - c. Five hundred thousand dollars (\$500,000) for each occurrence if the Gross Nameplate Rating of the generating facility is twenty (20) kW or less.
 - d. Two hundred thousand dollars (\$200,000) for each occurrence if the Gross Nameplate Rating of generating facility is ten (10) kW or less and the generating facility is connected to residential customer.
4. Each public liability policy shall name the City as an additional insured. A copy of the said policy or certificate of insurance shall be sent to the City Clerk of the City of Lodi. Provisions shall be made for the City Clerk to be notified within five days of any cancellation of the said insurance policy.
5. The City shall not be liable whether in contract or in tort or under any other legal theory to the owner of a QF, or the owner's customers, or any other person or entity for (1) lost generation revenue, (2) loss of use revenue or profit, (3) cost of capital, (4) substitute use or performance or (5) for any other incidental, indirect, special, or consequential damages.

D. Conditions of Interconnection

1. The City shall allow interconnection between its facilities and QF on a continuing basis as long as the parallel operation of the QF does not degrade, in any way, the quality of electric service provided to the City's other customers. The QF shall insure that its operation in no way creates unsafe conditions either at its facility or on the City's facilities.



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2. The owner of the QF shall enter into a written agreement with the City for interconnection, sale or disposal of its power prior to actual connection and operation of the QF.
3. The QF shall comply with all requirements of the National Electrical Safety Code, American National Standards Institute (ANSI), Institute of Electrical and Electronic Engineers (IEEE), American Society of Mechanical Engineers (ASME), the National Electric Code, General Order No. 95 and all local, state and federal rules and regulations or codes which may be applicable.

E. Interconnection

1. The owner of the QF shall, to the point of interconnection; furnish, install, operate and maintain in good repair and without cost to the City such relays, locks and seals, breakers, automatic synchronizers and other control and protective equipment as shall be designated by the City as suitable for operation of such a facility.
2. The owner of the QF shall provide at no cost to the City a manually operated and lockable, visual disconnect device that shall be for the exclusive use of the City and accessible by City representatives at all times. Usually such device will be an air switch or fused cutouts located near the point of interconnection.
3. The protective switching equipment outlined above in paragraph two (2) may be operated without notice or liability by the City or City representative if, in the opinion of the City or its representative, continued operation of the QF in connection with the utility's system may create or contribute to a system emergency or safety hazard. The City shall endeavor to minimize any adverse effects of such operation on the QF.
4. Any costs of interconnection incurred by the City due to the interconnection of the QF, which are over and above the interconnection costs that would be incurred due to the connection of a comparable non-generating customer, shall be the responsibility of the QF. Special modifications to the City's system may be required if the generator output is large in relation to the feeder capacity. It may be necessary to build a new feeder or re-conductor to the nearest substation that is large enough to accommodate the energy. Station modification may be necessary, such as: voltage check scheme, supervisory control, special protective relaying metering and a new circuit breaker position.



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5. The City shall be advised of the proposed start up and parallel time for such facilities and a City representative shall be in attendance and approve parallel operation. The design requirements may change and will be reviewed in each instance.

F Protective Equipment

The function of protective equipment, such as fuses, relays and circuit breakers, is to promptly remove the in feed from the QF whenever a fault occurs. The protective equipment requirements are not intended to protect the QF from every possible source of damage. The QF may wish to install additional protective equipment to protect its equipment. The requirements have been summarized into three groups with division by the size of the total generation. The division is only approximate and the requirements will be reviewed in each instance.

1. Generator Size Less Than 10 KW:
 - a. The QF is to provide phase over current protection by means of an over current relay or a breaker that provides over current protection on each phase. The generator over current breaker must have the following features, if used:
 1. Thermal, magnetic over current
 2. Under voltage release
 3. Solenoid tripping
 - b. A ground over current sensing scheme must be provided to assure the isolation of the QF from the distribution system in the event a ground fault occurs - on the distribution line. The protection scheme will vary depending on the transformer connection. As an example, a transformer connected Delta on the generator side of the transformer and grounded Wye on the line side, will require a ground over current relay be connected to the high voltage neutral of the transformer.
 - c. Over and under voltage protection is required.
 - d. Electrical relays or mechanical interlocks must be provided to prevent the QF from being connected parallel to the City's system, if the City's system is de-energized



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2. Generator Size 10 KW - 100 KW:

In addition to the requirements for generators less than 10 kw, under and over frequency protection is required.

3. Generator Size Greater Than 100 KW

In addition to the requirements for generators 10 kw - 100 kw, directional over current voltage restrained relays will be required in lieu of the phase over current relays (51).

G. Power Factor

The power output of the QF must approach unity power factor when operated in parallel with the City's facilities. Equipment shall be installed to correct any deficiencies in power factor by the owner of the QF and at the QF'S expense.

H. Metering Requirements

1. The point of metering shall be the interface of ownership between the QF and the City. Two watt-hour meters with detents will be required, one for sales to the QF by the City and one for sales to the City by the QF. At the City's option, additional metering for generation data collection and reactive measurements may be required. The QF is responsible for furnishing all equipment required to receive the City's metering transformers, meters and other equipment. The customer shall submit his switchboard and metering drawings to the City for approval prior to manufacture.
2. The City 'shall own and maintain all necessary meters and associated equipment utilized for billing and monitoring the QF as well as the customer's load.

I. QF Operating Requirements

This section provides the operating requirements that the QF must follow.

1. The operation of the QF must not reduce the quality of service to other customers. Abnormal voltages, currents, frequencies, or interruptions are not permitted.
2. The QF will at no time energize a de-energized City circuit.
3. The QF shall not bypass or modify any of the protective equipment.



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4. Before the QF attempts to reconnect his system in parallel with the City's system approval from the City Utility Operator must be obtained. Approval is not required if parallel operation ceased due to a lack of sufficient power to the prime mover (such as lack of wind).
5. The QF shall maintain a daily operation log for the generation facility. Such log shall contain information on unit parallel and separation time, maintenance, outages, trip operation and other unusual events. KW and KVAR operating levels may also be required. The City shall have the right to periodically review these logs.
6. The QF is responsible for performing scheduled maintenance on the equipment to keep the facility in proper operating condition. The City reserves the right to inspect the QF.
7. The City reserves the right to discontinue parallel generation with reasonable notice for any of the following reasons:
 - a. The City needs to perform non-emergency maintenance, repair or other work on the City system.
 - b. The QF degrades the quality of service to other customers.
 - c. Inspection of the QF or operation log reveals a hazardous condition or a lack of scheduled maintenance.
8. The City reserves the right to open the main disconnecting device and cease parallel operation without prior notice in the event of a system emergency.

(End)

Effective July 1, 2006

Comparison of Insurance Provisions

Facility: Small Generating Facility & QF

General Liability Insurance with:	PG&E	SCE	MISO	CPUC D0012037	IREC	FERC/MPUC	Lodi Electric Utility	
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2MW or less			\$ 5,000,000.00					
Greater Than 5MW						\$5,000,000.00		
Greater Than 2MW & Less Than or Equal to 20MW			\$10,000,000.00					

EXHIBIT B