## State of California AIR RESOURCES BOARD

## **Executive Order DG-009-A**

## Distributed Generation Certification of FlexEnergy Energy Systems 250SM microturbine

WHEREAS, the California Air Resources Board was given the authority under California Health and Safety Code section 41514.9 to establish a statewide Distributed Generation (DG) Certification Program to certify electrical generation technologies that are exempt from the permit requirements of air pollution control or air quality management districts;

WHEREAS, this DG Certification does not constitute an air pollution permit or eliminate the responsibility of the end user to comply with all federal, state, and local laws, rules and regulations;

WHEREAS, on May 31, 2005, Ingersoll Rand Energy Systems applied for a DG Certification of its 250 kW 250SM microturbine and whose application was deemed complete on June 30, 2005;

WHEREAS, Ingersoll Rand Energy Systems was issued DG Certification Executive Order DG-009 on October 21, 2005, for its 250SM microturbine;

WHEREAS, on September 22, 2009, Ingersoll Rand Energy Systems requested a recertification of the 250SM microturbine based on the February 23, 2005, source test, and that application was deemed complete on September 25, 2009;

WHEREAS, on November 25, 2009, Ingersoll Rand Energy Systems was issued an extension of DG Certification DG-009 for its 250SM microturbine, wherein it was noted that no material changes to model form, fit, or function have been made;

WHEREAS, on April 4, 2011, FlexEnergy Energy Systems presented verification of the purchase of Ingersoll Rand Energy Systems, including the 250SM microturbine technology, effective December 31, 2010, at 11:59 p.m.;

WHEREAS, FlexEnergy Energy Systems was issued Executive Order DG-009-A, superseding Executive Order DG-009, for the purpose of modifying the company name from Ingersoll Rand Energy Systems to FlexEnergy Energy Systems;

WHEREAS, on September 14, 2011, FlexEnergy Energy Systems conducted a new source test of the 250SM due to combustor design changes that had the potential to change emissions;

WHEREAS, on December 12, 2011, FlexEnergy Energy Systems requested a recertification of the 250SM microturbine based on the September 14, 2011, source test, and that application was deemed complete on January 17, 2012;

WHEREAS, FlexEnergy Energy Systems was issued a recertification of DG Certification Executive Order DG-009-A on November 15, 2012, for its 250SM microturbine;

WHEREAS, on November 13, 2017, FlexEnergy Energy Systems requested a recertification of the 250SM microturbine, and that application was deemed complete on November 27, 2017;

WHEREAS, the November 13, 2017, recertification request included documentation stating a higher efficiency heat exchanger is offered with the 250SM microturbine, and that the higher efficiency heat exchanger will reduce the mass emission rate without changing the stack emission rate;

WHEREAS, the 250SM microturbine is manufactured and sold integrated with combined heat and power technology;

WHEREAS, California Code of Regulations (CCR), title 17 §94203(b) allows for an energy credit at the rate of one megawatt-hour for each 3.4 million British thermal units of heat recovered to be used when calculating emission rates;

WHEREAS, FlexEnergy Energy Systems has demonstrated, according to test methods specified in CCR, title 17 §94207, that its natural-gas-fueled 250SM microturbine has complied with the following emission standards:

- 1. Emissions of oxides of nitrogen no greater than 0.07 pounds per megawatt-hour.
- 2. Emissions of carbon monoxide no greater than 0.10 pounds per megawatt-hour.
- 3. Emissions of volatile organic compounds no greater than 0.02 pounds per megawatt-hour.

WHEREAS, FlexEnergy Energy Systems has demonstrated that its 250SM microturbine complies with the minimum efficiency requirement in CCR, title 17 §94203(b)(2);

WHEREAS, FlexEnergy Energy Systems has demonstrated that 250SM microturbine complies with the emissions durability requirements in CCR, title 17 §94207 (d); and

WHEREAS, I find that the Applicant, FlexEnergy Energy Systems, has met the requirements specified in CCR, title 17, article 3, Distributed Generation Certification Program, and has satisfactorily demonstrated that the 250SM microturbine meets the DG Certification Regulation's 2007 Fossil Fuel Emission Standards;

NOW THEREFORE, IT IS HEREBY ORDERED, that DG Certification DG-009-A, executed at Sacramento, California on November 15th, 2012 is hereby extended.

This DG Certification:

- Is subject to all conditions and requirements of CCR, title 17, article 3, Distributed Generation Certification Program, including the provisions relating to inspection, denial, suspension, and revocation.
- Shall be void if any manufacturer's modification results in an increase in emissions or changes the efficiency or operating conditions of a model, such that the model no longer meets the 2007 DG Certification emission standards.
- 3) Shall be void if the unit is manufactured or sold without the combined heat and power system integrated.
- 4) Shall be void if any manufacturer modification results in the model no longer meeting the minimum efficiency requirements in section 94203 (b).
- 5) Shall expire on the 15 day of November, 2022.

Executed at Sacramento, California, this 1st day of February 2018.

/s/

Floyd V. Vergara, Esq., P.E. Chief, Industrial Strategies Division