TABLE I—Continued

Variety	Regulation period	Minimum grade	Minimum diameter (inches)
(1)	(2)	(3)	(4)
* * *	* * *	* * *	*

(b) * * *

TABLE II

Variety	Regulation period	Minimum grade	Minimum diameter (inches)
(1)	(2)	(3)	(4)
Oranges			
Early and midseason	01/29/90–08/19/90	U.S. No. 1 Golden	2 4/16
	On and after 08/20/90	U.S. No. 1	2 4/16
Navel	On and after 11/24/89	U.S. No. 1 Golden	2 4/16
Temple	On and after 11/24/89	U.S. No. 1	2 4/16
Valencia and other late type	March 23, 1992–9/27/92	U.S. No. 1	2 4/16
	On and after 9/28/92	U.S. No. 1	2 4/16
* * *	* * *	* * *	*

* * * * *

[Subpart Redesignated as Subpart E and Amended]

■ 7. Redesignate ''Subpart—Interpretive Rule'' as subpart E and revise the heading to read as follows:

Subpart E—Interpretations

Dated: November 9, 2017.

Bruce Summers,

Acting Administrator, Agricultural Marketing Service.

[FR Doc. 2017–24701 Filed 11–15–17; 8:45 am]

BILLING CODE 3410–02–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 33

[Docket No. FAA–2017–0537; Notice No. 33–17–02–SC]

Special Conditions: General Electric Company, GE9X Engine Models; Endurance Test Special Conditions

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final special conditions.

SUMMARY: These special conditions are issued for the General Electric Company turbofan engine models GE9X–105B1A, –105B1A1, –105B1A2, –105B1A3, –102B1A, –102B1A1, –102B1A2, –102B1A3, and –93B1A. In these special conditions, the engine models will be referred to as ''GE9X.'' The engines will have novel or unusual design features associated with the engine design. The applicable airworthiness regulations do not contain adequate or appropriate safety standards for these design features. These special conditions contain the additional safety standards that the Administrator considers necessary to establish a level of safety equivalent to that established by the existing airworthiness standards.

DATES: Effective December 18, 2017.

FOR FURTHER INFORMATION CONTACT: Diane Cook, AIR–6A1, Engine and Propeller Standards Branch, Aircraft Certification Service, 1200 District Avenue, Burlington, Massachusetts 01803–5213; telephone (781) 238–7111; facsimile (781) 238–7199; email *diane.cook@faa.gov.*

SUPPLEMENTARY INFORMATION:

Background

On January 29, 2016, General Electric Company (GE) applied for a type certificate for their new GE9X turbofan engine models. The GE9X engine models are high-bypass-ratio engines that incorporate novel or unusual design features. The GE9X engine models incorporate new technologies such that the company cannot run the endurance test conditions prescribed in § 33.87 without significant modifications making the test vehicle non-representative of the type design.

Discussion

An alternative endurance test cycle has been developed that provides a level of safety equivalent with that intended by § 33.87. The alternate endurance test provides the test conditions that allow the engine to be run in type design configuration and demonstrate engine operability and durability as well as systems functionality to a level intended by the current § 33.87 rule.

These special conditions provide the necessary conditions for verification of engine-level and component-level effects as intended by the current § 33.87 Endurance test. The test is run in engine type design configuration, with only limited test enabling modifications as needed. The special conditions include a demonstration for the oil, fuel, air bleed, and accessory drive systems as required in the current § 33.87 Endurance test.

The equivalent level of severity intended by the § 33.87 Endurance test is provided by an engine test demonstration at the gas path limiting temperature and at shaft speed redlines and at the most extreme shaft speeds as determined through a critical point analysis (CPA). In addition, times on condition and cycle counts were developed to allow additional challenges to the novel or unusual

design features that would not have been as challenged by the current § 33.87 test schedule.

The level of durability is equivalent with that intended by the rule, which considers the damage accumulated during the test for the limiting damage mechanisms for components and engine systems, up to and including the applicable limitations declared in the Type Certificate Data Sheets (TCDS). The alternate test schedule provides conditions in the engine for a sufficient amount of time to demonstrate that no potential safety issue will develop from the limiting damage mechanisms while operating in service.

The special conditions for §§ 33.4 and 33.29 are added to support an equivalent compliance by means of mandatory inspections prescribed in paragraph (b)(3) of the § 33.87 special conditions. These special condition requirements maintain a level of safety equivalent to the level intended by the applicable airworthiness standards in effect on the date of application.

Type Certification Basis

Under the provisions of Title 14, Code of Federal Regulations (14 CFR) 21.17, GE must show that the GE9X engine models meet the applicable provisions of part 33, as amended by Amendments 33–1 through 33–34. The FAA has determined that the applicable airworthiness regulations in part 33 do not contain adequate or appropriate safety standards for the GE9X engine models because of their novel or unusual engine design features. Therefore, these special conditions are prescribed under the provisions of 14 CFR 11.19 and 21.16, and will become part of the type certification basis for GE9X engine models in accordance with § 21.17(a)(2).

Novel or Unusual Design Features

The GE9X engine models will incorporate the following novel or unusual design features: Technological advances that reduce noise and emissions while improving fuel efficiency and increasing thrust, when compared to previous similarly certificated GE engine models. The technological advances are incorporated into hardware design, materials, and engine operating characteristics. Introduction of complex cooling systems and film-cooled components cause metal temperatures to be significantly influenced by cooling air temperatures and air flows and are no longer in direct proportion to the gas path temperature which is a target of the current endurance test. Introduction of new materials, new design features, and operating conditions also introduced new failure modes that are not targeted by the current endurance test cycle. Some of the technological advancements were introduced in prior GE engine models and mitigated by modifications to the test engine.

For past certifications, GE has shown that the engine design, as modified, still represented the durability and operating characteristics of the intended type design but the modifications needed to the GE9X engine model to run the § 33.87 Endurance test cannot be reconciled and would affect the test outcome.

Discussion of Comments

Notice of proposed special conditions No. 33–17–02–SC for the GE9X engine models was published in the **Federal Register** on 82 FR 28790. We received one comment from an anonymous commenter that acknowledged the need for special conditions as it concerns the GE9X engines models. We understand and acknowledge the comment we received, which is supportive of a special condition for the GE9X engine model. No further response is required.

Applicability

As discussed above, the special conditions are applicable to the GE9X engine model(s). Should GE apply at a later date for a change to the type certificate to include another model on the same type certificate incorporating the same novel or unusual design feature, the special conditions would apply to that model as well.

Conclusion

This action affects only certain novel or unusual design features on the GE9X turbofan engine models. It is not a rule of general applicability and applies only to GE, who requested FAA approval of this engine feature.

List of Subjects in 14 CFR Part 33

Aircraft, Engines, Aviation safety, Reporting and recordkeeping requirements.

The authority citation for these special conditions is as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701, 44702, 44704.

The Special Conditions

■ Accordingly, pursuant to the authority delegated to me by the Administrator, the following special conditions are issued as part of the type certification basis for the GE9X engine models: GE9X–105B1A, –105B1A1, –105B1A2, –105B1A3, –102B1A, –102B1A1, 102B1A2, –102B1A3, and –93B1A.

PART 33—REQUIREMENTS

§ 33.4 Instructions for Continued Airworthiness

The Airworthiness Limitations section must prescribe the mandatory post-flight inspections and maintenance actions associated with any exceedance required by the endurance test, paragraph (b)(3), of these special conditions.

§ 33.29 Instrument Connection

The engine must have means, or provisions for means, to automatically record and alert maintenance personnel of each occurrence of any exceedance required by the endurance test paragraph (b)(3), of these special conditions.

§ 33.87 Endurance Test

(a) *General:* The applicant must show that the endurance test schedule in combination with any prescribed mandatory actions provide an equivalent level of severity and demonstration of durability and operability as that intended by § 33.87(a) and (b). When showing that the level of durability is equivalent with that intended by the rule, the applicant must consider the damage accumulated during the test for the limiting damage mechanisms for components and engine systems, up to and including the applicable limitations declared in the type certificate data sheets (TCDS). The test cycle content must create conditions in the engine for a sufficient amount of time to demonstrate no potential safety issue will develop from the limiting damage mechanisms while operating in service. The following minimum requirements apply:

(1) Conduct the tests in paragraphs (b), (c), and (d) of these special conditions, for total cumulative and dwell time duration between ground idle and the takeoff thrust prescribed in these special conditions. The test cycle durations must include all maximums allowed in the TCDS and expected service operation.

(2) Requirements of § 33.87(a)(1), (2), (4), and (6).

(3) Requirements of § 33.87(a)(3) applicable to the temperature of external surfaces of the engine.

(4) Testing for maximum air bleed must be at least equal with the prescribed test required in § 33.87(a)(5). However, for these cycles, the thrust or the rotor shaft rotational speed may be less than 100 percent of the value associated with the particular operation being tested if the FAA finds that the validity of the endurance test is not compromised.

(5) Testing for engine fuel, oil, and hydraulic fluid pressure and oil temperature must be at least equal with the prescribed test required in § 33.87(a)(7).

(6) If the number of occurrences of either transient rotor shaft overspeed or transient gas over temperature is not limited, at least 155 accelerations must be made at the limiting overspeed or over temperature. If the number of occurrences is limited, that number of accelerations must be made at the limiting overspeed or over temperature.

(7) One hundred starts must be made, of which:

(i) Twenty-five starts must be preceded by at least a two-hour engine shutdown.

(ii) Ten false engine starts must be accomplished, pausing for the applicant's specified minimum fuel drainage time, before attempting a normal start.

(iii) Ten normal restarts must be accomplished with not longer than 15 minutes since engine shutdown.

The remaining starts may be made after completing the endurance testing prescribed by these special conditions.

(8) Unless otherwise specified (*i.e.* (d)(2) of these special conditions), for accelerations from ground idle to takeoff, the throttle must be moved in not more than one second, except that, if different regimes of control operations are incorporated necessitating scheduling of the thrust-control lever motion in going from one extreme position to the other, a longer period of time is acceptable, but not more than two seconds.

(i) When operating with max oil temperatures the throttle movement may be 'stair-stepped' to allow for oil temperature stabilization for durations greater than two seconds.

(9) The applicant must validate any analytical methods used for compliance with these special conditions. Validation includes the ability to accurately predict an outcome applicable to the engine being tested.

(10) The applicant must perform the endurance test on an engine that substantially conforms to its type design. Modifications may be made as needed to achieve test conditions and/or engine operating conditions representative of the type design.

(b) Conduct the endurance test at or above the declared shaft speeds and gas temperatures limits, and at or above conditions representative of critical points (speeds, temperatures, rated thrust) in the operating envelope.

(1) Conduct the endurance test at or above the rated takeoff thrust and rated maximum continuous thrust and with the associated limits for rotor speeds and gas temperature (redlines), as follows:

(i) Either rotor speed or gas temperature, or concurrent rotor speed and gas temperature, if analysis indicates a combination of redline operational conditions is possible to occur in service, must be at least 100 percent of the values associated with the engine rating being tested.

(ii) The cumulative test time duration and number of cycles must be representative of the rotor speed and gas temperature excursions to redlines that can be expected to occur in between overhauls.

(iii) The time durations for each takeoff or maximum continuous segment must include all maximums allowed in the TCDS and expected service operation and must include the following cycles:

(A) At least one (1) takeoff cycle of 5-minutes time duration at the low pressure rotor speed limit and gas temperature limit (redlines).

(B) At least one (1) takeoff cycle of 5-minutes time duration at the high pressure rotor speed limit and gas temperature limit (redlines).

(C) In lieu of the separate cycles specified in paragraphs (A) and (B) of this section, the applicant may run the low pressure and high pressure rotor speeds and gas temperature limits (redlines) in the same cycle. However, in this case, the applicant must run at least 2 cycles of 5 minutes' time duration each.

(2) Conduct the endurance test at or above the rated takeoff thrust and the rated maximum continuous thrust with rotor speeds at or above those determined by a critical point analysis (CPA) and with gas temperature redline conditions as follows:

(i) The applicant must determine through a CPA the highest rotor shaft rotational speeds (CPA speeds) expected to occur for each rotor shaft system within the declared operating envelope. The CPA must be conducted for the takeoff and maximum continuous rated thrust and must consider the declared operating envelope, engine deterioration, engine-to-engine variability, and any other applicable variables that can cause the engine to operate at the extremes of its performance ratings.

(ii) Except as provided in paragraph (b)(3)(ii) of these special conditions, conduct a cyclic test between ground idle and combined takeoff and maximum continuous thrust ratings, as follows:

(A) Eighteen hours and forty-five minutes (18.75 hours) cumulated time duration at or above the rated takeoff thrust, the gas temperature limit for takeoff (redline), and the CPA rotor speeds for takeoff determined per paragraph (b)(2)(i) of these special conditions.

(B) Forty-five (45) hours cumulated time duration at or above the rated maximum continuous thrust, the gas temperature limit for maximum continuous (redline), and the CPA rotor speeds for maximum continuous determined per paragraph (b)(2)(i) of these special conditions.

(C) The time durations for each takeoff or maximum continuous segments must include all maximums allowed in the TCDS and expected service operation, and must include at least one maximum continuous cycle of 30 minutes run continuously.

(3) If the cyclic shaft speed excursions specified in paragraphs (b)(1) or (b)(2) of these special conditions cannot be demonstrated in the test, then an alternative equivalent with the rule intent must be provided. Alternatives may include alternate means of test demonstration, mandatory actions, or other means found acceptable to the FAA. The applicant must prescribe a mandatory action plan for engine operation between the shaft speeds demonstrated for a minimum of cumulated 18.75 hours at or above rated takeoff and 45 hours at or above rated maximum continuous, respectively, and the declared speed limits (redlines), as follows:

(i) Prescribe post-event actions or operating limitations acceptable to the FAA for operation below the declared speed limits (redlines) and above the CPA speeds.

(ii) If the test required by (b)(2)(ii) of these special conditions can only be accomplished at a rotor shaft speed lower than the CPA speed, prescribe post-event actions or operating limitations acceptable to the FAA for operation below that CPA speed and above the value demonstrated during the test.

(c) Conduct the endurance test at the incremental cruise thrust that must be at least equal with the prescribed test required in § 33.87(b)(4). The 25 incremental test cycles must be uniformly distributed throughout the entire endurance test.

(d) Conduct at least 300 cycles between ground idle and combined rated takeoff and rated maximum continuous thrust, as follows:

(1) Each cycle to include acceleration to or above rated takeoff thrust, deceleration from takeoff to ground idle, followed by 5 to 15 seconds at ground idle, acceleration to or above rated

maximum continuous thrust, and deceleration to ground idle.

(2) The throttle movement from ground idle to rated takeoff or maximum continuous thrust and from rated takeoff thrust to ground idle should be not more than one (1) second, except that, if different regimes of control operations are incorporated necessitating scheduling of the thrust-control lever motion in going from one extreme position to the other, a longer period of time is acceptable, but not more than two (2) seconds. The throttle movement from rated maximum continuous thrust to ground idle should not be more than five (5) seconds.

(3) The time durations for each cycle associated with either takeoff or maximum continuous thrust segments must include all maximums allowed in the TCDS and expected service operation, and must include the following cycles:

(i) Three (3) cycles of 5 minutes each and one (1) cycle of 10 minutes at the takeoff thrust.

(ii) Three (3) cycles of 30 minutes each at the maximum continuous thrust.

Issued in Burlington, Massachusetts, on November 8, 2017.

Robert J. Ganley,

Manager, Engine and Propeller Standards Branch, Aircraft Certification Service.

[FR Doc. 2017–24812 Filed 11–15–17; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

18 CFR Part 35

[Docket No. RM16–5–001; Order No. 831–A]

Offer Caps in Markets Operated by Regional Transmission Organizations and Independent System Operators

AGENCY: Federal Energy Regulatory Commission, Department of Energy.

ACTION: Order on rehearing and clarification.

SUMMARY: The Federal Energy Regulatory Commission is granting in part and denying in part requests for rehearing and clarification of its determinations in Order No. 831, which amended its regulations to address incremental energy offer caps in markets operated by regional transmission organizations and independent system operators.

DATES: This rule is effective January 16, 2018.

FOR FURTHER INFORMATION CONTACT:

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SUPPLEMENTARY INFORMATION:

TABLE OF CONTENTS

I. Introduction

1. On November 17, 2016, the Federal Energy Regulatory Commission (Commission) issued Order No. 831.[1] Order No. 831 addresses the incremental energy offer component of a resource's supply offer, which is a financial component consisting of costs that vary with a resource's output or level of demand reduction. Incremental energy offers are one of the components used to calculate locational marginal prices (LMPs). California Independent System Operator Corporation (CAISO), ISO New England Inc. (ISO–NE), Midcontinent Independent System Operator, Inc. (MISO), New York Independent System Operator, Inc. (NYISO), and Southwest Power Pool, Inc. (SPP) currently have a $1,000/MWh cap on incremental energy offers (offer cap), and PJM Interconnection, L.L.C. (PJM) currently has an offer cap of $2,000/MWh on cost-based offers.[2]

2. In Order No. 831, the Commission amended its regulations to require that each regional transmission organization and independent system operator (RTO/ISO): (1) Cap each resource's incremental energy offer at the higher of $1,000/MWh or that resource's verified cost-based incremental energy offer; and (2) cap verified cost-based incremental energy offers at $2,000/MWh when calculating LMPs (hard cap).[3] Resources with verified cost-based incremental energy offers above $2,000/MWh will be eligible to receive uplift.[4] In response to comments on the Notice of Proposed

[1] *Offer Caps in Markets Operated by Regional Transmission Organizations and Independent System Operators,* 81 FR 87,770 (Dec. 5, 2016), FERC Stats. & Regs. ¶ 31,387 (2016) (Order No. 831).

[2] Order No. 831, FERC Stats. & Regs. ¶ 31,387 at PP 11–13.

[3] *Id.* P 1.

[4] *Id.* P 78.