

**§ 80.859 Main power supply.**

(a) The main power supply must simultaneously energize the radiotelephone transmitter at its required antenna power and the required receivers. Under this load condition the voltage of the main power supply at the radiotelephone input terminals must not deviate from its rated potential by more than 10 percent on ships completed on or after July 1, 1941, nor by more than 15 percent on ships completed before that date.

(b) Means must be provided for charging any batteries used as a main power supply. A continuous indication of the rate and polarity of the charging current must be provided during charging of the batteries.

**§ 80.860 Reserve power supply.**

(a) When the main power supply is not on the same deck as the main wheelhouse or at least one deck above the vessel's main deck, a reserve power supply must be provided and must be so situated. The location of the reserve power supply must be located as near to the required transmitter and receivers as practicable and meet all applicable rules and regulations of the United States Coast Guard.

(b) The reserve power supply must be independent of the propelling power of the ship and of any other electrical system, and must simultaneously energize the radiotelephone transmitter at its required antenna power, the required receivers, the emergency light and the automatic radiotelephone alarm signal generator. The reserve power supply must be available at all times.

(c) The reserve power supply may be used to energize the bridge-to-bridge radiotelephone and the VHF radiotelephone installation required by § 80.871.

(d) All circuits connected to the reserve power supply must be protected from overloads.

(e) Means must be provided for charging any batteries used as a reserve power supply. A continuous indication of the rate and polarity of the charging current during charging of the batteries must be provided.

(f) The cooling system of each internal combustion engine used as a part of

the reserve power supply must be adequately treated to prevent freezing or overheating consistent with the season and route to be traveled by the particular vessel involved.

(g) The reserve power supply must be available within 1 minute.

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**§ 80.861 Required capacity.**

If the main power supply or the reserve power supply provided for the purpose of complying with §§ 80.859 and 80.860 consists of batteries, the batteries must have sufficient reserve capacity available at all times while the vessel is leaving or attempting to leave a harbor or port for a voyage in the open sea, and while being navigated in the open sea outside of a harbor or port, to permit operation of the radiotelephone transmitter and the required receivers for at least 6 hours continuously under normal working conditions.

**§ 80.862 Proof of capacity.**

(a) When directed by the Commission or its authorized representative, the station licensee must prove that the requirements of § 80.861 are met.

(b) Proof of the ability of a battery used as a main or reserve source to operate continuously for 6 hours can be established by a discharge test over a prescribed period of time, when supplying power at the voltage required for normal and operation to an electrical load as prescribed by paragraph (d) of this section.

(c) When the reserve power supply is an engine-driven generator, proof of the adequacy of the engine fuel supply to operate the unit continuously for 6 hours can be established by measuring the fuel consumption for 1 hour when supplying power, at the voltage required for normal operation, to an electrical load as prescribed by paragraph (d) of this section.

(d) In determining the electrical load to be supplied, the following formula must be used:

(1) One-half of the current of the required transmitter at its rated power output.