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(54) **SYSTEMS AND METHODS FOR PREDICTIVE LOAD RESPONSE**

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(57) **ABSTRACT**

Systems and methods for regulating transient deviations in an output voltage of a power generator system are provided. An automatic voltage regulator (AVR) may receive a predictive load signal from a load. The predictive load signal may relate to an anticipated change in the load. The predictive load signal can be configured to include information of the anticipated change in the load. The AVR may extract the information of the anticipated change in the load from the predictive load signal, responsive to receiving the predictive load signal. The AVR may analyze the extracted information to determine whether the anticipated change causes a transient deviation above a predetermined level in the output voltage. The AVR may adjust an excitation current of an alternator prior to detecting a difference between a voltage setpoint and the output voltage, responsive to determining that the anticipated change in the load causes the transient deviation.

