SUMMARY

[0013] This section provides a general summary of the disclosure, and is not a comprehensive disclosure of its full scope or all of its features.

[0014] A radio frequency (RF) control system includes a power amplifier that outputs a RF signal to a load. A sensor monitors the RF signal and generates a sensor signal based on the RF signal. An energy detection circuit determines an energy of the RF signal in accordance with the sensor signal. A power amplifier energy adjustment circuit generates a control signal for varying the RF signal to a predetermined energy setpoint in accordance with the energy determined by the energy detection circuit.

[0015] A radio frequency (RF) control system includes a power amplifier that outputs a RF signal to a load. A sensor monitors the RF signal and generates a sensor signal based on the RF signal. An energy detection circuit determines an energy of the RF signal in accordance with the sensor signal. A power detection circuit determines a power of the RF signal in accordance with the sensor signal. A power amplifier energy adjustment circuit generates a control signal for varying the RF signal in accordance with the energy determined by the energy detection circuit and the power determined by the power detection circuit. The RF signal includes a first signal and a first modulation signal modulating the first signal, and the energy detection circuit determines the energy of the first modulation signal to determine the energy of the RF signal.

[0016] A radio frequency (RF) control system includes a plurality of power amplifiers that output a respective RF signal to a load. Each power

amplifier includes a power amplifier that outputs a RF signal to a load; a sensor that monitors the RF signal and generates a sensor signal based on the RF signal; an energy detection circuit that determines an energy of the RF signal in accordance with the sensor signal; and a power amplifier energy adjustment circuit that generates a control signal for varying the RF signal in accordance with the energy determined by the energy detection circuit. A RF delivery coordination module controls the phase ~~coherence~~ between the respective ~~RF~~ power amplifiers~~supplies~~.

[0017] A radio frequency (RF) control system includes a plurality of power amplifiers that outputs a respective pulsed RF signal to a load. Each power amplifier includes a power amplifier that outputs a RF signal to a load; a sensor monitoring the RF signal and generating a sensor signal based on the RF signal; an energy detection circuit determining an energy of the RF signal in accordance with the sensor signal; and a power amplifier energy adjustment circuit generating a control signal for varying the RF signal in accordance with the energy determined by the energy detection circuit. A RF delivery coordination module synchronizes the respective RF power amplifiers~~supplies~~.

[0017a] A radio frequency (RF) control system includes a power amplifier that outputs a RF signal to a load; a sensor monitoring the RF signal and generating a sensor signal based on the RF signal; a power determination circuit determining a power in accordance with the sensor signal and generating a power signal; an energy detection circuit determining an energy of the RF signal in accordance with the power signal; and a power amplifier energy adjustment circuit generating a

control signal for varying the RF signal in accordance with the energy determined by the energy detection circuit.

[0018] Further areas of applicability will become apparent from the description provided herein. The description and specific examples in this summary are intended for purposes of illustration only and are not intended to limit the scope of the present disclosure.