

AMENDMENT TO THE CLAIMS:

Set forth below in ascending order, with status identifiers, is a complete listing of all claims currently under examination. Changes to any amended claims are indicated by [[double brackets]], ~~striketrough~~ and/or underlining. This listing also reflects any cancellation and/or addition of claims.

1.-20. (Canceled)

21. (Currently Amended) A system for intelligent power management, comprising:
an appliance having a battery module and a heat transfer element, the battery module being configured to provide power to the heat transfer element ~~appliance~~;

a sensor coupled to the heat transfer element ~~appliance~~ and not coupled to the battery module to monitor ~~an operation condition~~ a temperature value of the heat transfer element ~~the appliance~~ at a specific time point; and

a control unit communicatively coupled to the sensor to collect information obtained from the sensor, the control unit being configured to determine whether to adjust the power provided to the heat transfer element ~~appliance~~ from the battery module based on the ~~operation condition~~ temperature value of the heat transfer element ~~appliance~~.

22. (Currently Amended) The system of claim 21, wherein the appliance is a stove and the sensor is a ~~video~~ temperature sensor.

23. (Currently Amended) The system of claim 22, wherein the ~~video~~ temperature sensor is configured to monitor a cooking process.

24. (Currently Amended) The system of claim 23, wherein:
the heat transfer element includes a stovetop burner, and
the control unit is configured to determine whether to adjust the power provided to the stovetop burner of the stove from the battery module according to the cooking process and a predefined cooking protocol.

25. (Currently Amended) The system of claim 21, wherein the appliance is a refrigerator and the sensor is a ~~video~~ temperature sensor.

26. (Currently Amended) The system of claim 25, wherein the ~~video~~ temperature sensor is configured to detect ~~type of~~ a temperature sensitivity of food items stored in the refrigerator.

27. (Currently Amended) The system of claim 26, wherein the control unit is configured to determine whether to adjust the power provided to the heat transfer element of the refrigerator from the battery module according to the ~~detected type of~~ temperature sensitivity of the food items stored in the refrigerator.

28. (Currently Amended) The system of claim 21, wherein the control unit is further configured to determine a charge and discharge schedule for the battery module based on a power usage pattern of the heat transfer element ~~appliance~~.

29. (Previously Presented) The system of claim 28, further comprising one or more sensors or third party services coupled to the control unit and configured to collect contextual information related to one or more of the battery module or the appliance.

30. (Previously Presented) The system of claim 29, wherein the control unit further comprises a machine learning model trained to predict a usage of the appliance based on the collected contextual information.

31. (Previously Presented) The system of claim 30, wherein the control unit is further configured to adjust the determined charge and discharge schedule based on the predicted usage of the appliance by the trained machine learning model.

32. (Previously Presented) The system of claim 28, further comprising a physical user interface configured to receive a user input for manually editing the charge and discharge schedule for the battery module at a time point.

33. (Currently Amended) A method of intelligent power management, comprising:
monitoring ~~an operation condition~~ a temperature value of a heat transfer element of an appliance at a specific time point, ~~wherein the operation condition~~ temperature value [[is]] being monitored by a sensor coupled to the heat transfer element of the appliance and not coupled to a battery module included in the appliance;

collecting power usage data of the appliance at the specific time point, wherein the power usage data indicates power provided to the heat transfer element of the appliance by the[[a]] battery module included in the appliance; and

determining whether to adjust the power provided to the heat transfer element of the appliance from the battery module based on the ~~operation condition~~ temperature value of the heat transfer element of the appliance and the power usage data of the appliance.

34. (Currently Amended) The method of claim 33, wherein the appliance is a stove and the sensor is a ~~video~~ temperature sensor.

35. (Currently Amended) The method of claim 34, wherein the ~~video~~ temperature sensor is configured to monitor a cooking process.

36. (Currently Amended) The method of claim 35, wherein:
the heat transfer element of the stove includes a stovetop burner, and
determining whether to adjust the power provided to the heat transfer element of the appliance includes determining whether to adjust the power provided to the stovetop burner of the stove from the battery module according to the cooking process and a predefined cooking protocol.

37. (Currently Amended) The method of claim 33, wherein the appliance is a refrigerator and the sensor is a ~~video~~ temperature sensor.

38. (Currently Amended) The method of claim 37, wherein the ~~video~~ temperature sensor is configured to detect ~~type of~~ measure a temperature sensitivity of food items stored in the refrigerator.

39. (Currently Amended) The method of claim 38, wherein determining whether to adjust the power provided to the heat transfer element of the appliance includes determining whether to adjust the power provided to the heat transfer element of the refrigerator from the battery module according to the ~~detected type of~~ temperature sensitivity of the food items stored in the refrigerator.

40. (Currently Amended) The method of claim 33, further comprising:
determining a charge and discharge schedule for the battery module based on a power usage pattern of the heat transfer element of the appliance.

41. (New) The system of claim 21, wherein the appliance is any one of an air conditioner, a water heater, a space heater, an electric range, a microwave, an oven, a dishwasher, or a clothing dryer.

42. (New) The system of claim 31, wherein:
the appliance is an air conditioner, and
the contextual information includes weather data.

43. (New) The system of claim 31, wherein:
the appliance is an electric water heater, and
the contextual information includes at least one of (1) a first set of times indicating usage of a shower, (2) a second set of times indicating usage of the shower by a specific user, (3) a set of time periods defining durations of usage of the shower, or (4) water temperature data associated with usage of the shower.

44. (New) The system of claim 21, further comprising:
an audio sensor configured to detect a voice of a user of the appliance to produce audio data,
the control unit being configured to use a machine learning model to identify text from the audio data, the machine learning model being trained for voice recognition, the control unit configured to modify an operation of the appliance based on the text.

45. (New) The system of claim 21, further comprising:
an audio sensor configured to identify text from audio data, the audio data being representative of a voice of a user of the appliance,
the control unit configured to modify an operation of the appliance, based on the text.