circuitry for an electrically operated aerosol generating system~~, the electric circuitry being arranged to perform the method of the second aspect of the invention~~ comprising a liquid storage portion for storing liquid aerosol-forming substrate and an electric heater comprising at least one heating element for heating the liquid aerosol-forming substrate, the electric circuitry being arranged to perform at least the following: monitoring activation of the electric heater; and estimating an amount of liquid aerosol-forming substrate remaining in the liquid storage portion based on the monitored activation.

According to a fourth aspect of the invention, there is provided a computer program which, when run on programmable electric circuitry for an electrically operated aerosol generating system~~, causes the programmable electric circuitry to perform the method of the second aspect of the invention~~ comprising a liquid storage portion for storing liquid aerosol-forming substrate and an electric heater comprising at least one heating element for heating the liquid aerosol-forming substrate, causes the programmable electric circuitry to perform at least the following: monitoring activation of the electric heater; and estimating an amount of liquid aerosol-forming substrate remaining in the liquid storage portion based on the monitored activation.

According to a fifth aspect of the invention, there is provided a computer readable storage medium ~~having stored thereon a computer program according to the fourth aspect of the invention~~for running on a programmable electric circuitry for an electrically operated aerosol generating system comprising a liquid storage portion for storing liquid aerosol-forming substrate and an electric heater comprising at least one heating element for heating the liquid aerosol-forming substrate, the computer readable storage medium having stored thereon a computer program that causes the programmable electric circuitry to perform at least the following: monitoring activation of the electric heater; and estimating an amount of liquid aerosol-forming substrate remaining in the liquid storage portion based on the monitored activation.

Features described in relation to the aerosol generating system of the invention may also be applicable to the method of the invention. And, features described in relation to the method of the invention may also be applicable to the aerosol generating system of the invention.

The invention will be further described, by way of example only, with reference to the accompanying drawings, of which:

Figure 1 shows one example of an electrically operated aerosol generating system having a liquid storage portion;

Figure 2 is a plot of total particle mass versus power applied for two different liquid aerosol forming substrate compositions in a device of the type shown in Figure 1;

Figure 3 is a plot of evaporation rate versus temperature of a liquid composition up to boiling point, together with a curve correlated to the plotted points;

Figure 4 is a plot showing the evaporation rate of a liquid composition versus temperature in a device of the type shown in Figure 1, showing evaporation rate for two different power levels;

Figure 5 is a plot showing the evolution of temperature of a heating element during a puff, with different plots shown for different stages in the consumption of the liquid aerosol forming substrate;

Figure 6 is a plot showing the liquid evaporation rate during a puff and the corresponding temperature of the heating element;

Figure 7 is a plot showing the cumulative evaporated mass for a puff;