4. Epilog

A bullet list was begun on the second page of this paper that included eight specific examples, quizzing the reader on how Thermodynamics plays a major part in our everyday lives. It was hoped that as the reader progressed through the text, the correct responses to many, if not all, of the topic each bullet posed would come to mind. If not, the following should allay any further issues regarding the encompassment of Thermodynamics, if not just pertaining to the several points identified, but in many more common day occurrences that might have arisen in the mind of the reader.

- Clouds form as the Temperature of the air within which steam is entrained drops, resulting in a portion, if not all, of the steam changing state into micro-droplets of liquid water, forming visible clouds,
- Lens fogging results in a similar instance as described above, except a solid surface's Temperature drops while the concentration of steam in the volume surrounding this surface rises as moisture evaporates from the skin and eyes of the user. Some of the steam changes state to a liquid, this liquid deposits onto the lens as a fog [12],
- A quick glance at Figure 1 provides the answer. About 142.2 BTU/LbM is required to heat liquid water from 70° F to 212° F, while 970.3 BTU/LbM is required to change this liquid water to steam once it is at 212° F – 6.8 times the energy. Thus, given a constant source of heat, boiling water to a completely gaseous state takes 6.8 times as long as it does to raise the same mass of liquid water from 70° F to 212° F,
- Each refrigerant possesses its own unique Thermodynamic qualities, including the quantity of heat it can absorb at any given Temperature & Pressure. R-12 and 134A are totally unique, and for equipment intended for use with R-12, the amount of Enthalpy change at the evaporator's design Pressure (the quantity of heat absorbed) is greater than if 134A were used as a replacement,
- Each Apollo Saturn V first stage engine uses kerosene and LOX as its fuel. Oxidizing kerosene generates a precise amount of exothermic heat (~18,450 BTU/LbM). Through the application of several intermediate equations, this quantity of heat and the Thermodynamic Specific Volume of gas developed during oxidation equates to pounds of thrust. Knowing the spacecraft's precise weight, one can calculate the exact quantity of

[12] The reader is invited to view the Author's US Utility Patents Nos.: 6,470,696, 6,834,509 & 6,886,351 (available at the US Patent Office's web site www.USPTO.gov), that describe completely electronic Predict and Prevent™ technology that precludes all fogging & frosting from occurring on any surface.

kerosene and LOX required to achieve orbit, since it is a direct function of force (pounds of thrust) and spacecraft weight (load),

- A pressure cooker merely permits the volume within it to be raised to a greater Pressure, and as the reader now knows implicitly from this paper, an increase of Pressure results in an increase in cooking Temperature – the meal cooks faster because it is being cooked at a greater Temperature than if 'traditional' stove top means were to be used,
- The entirety of this paper acts as definitive proof of the statement made regarding the efficiency of Nuclear Power Plants. Numerous documents providing similar proof are available to the general public in the public domain, and lastly
- The answer to this final point should be self-evident, but if not, the following sentence should provide the reader with a logical starting point. If the best thermal efficiency available to generate usable electrical power (and propel our vehicles) is Nuclear Energy at 34%, and in its process if 66% of the energy invested goes directly to waste in our atmosphere (and is essentially unrecoverable), is it not apparent that if *we* are *constantly* and in greater *quantities* dumping waste heat into our own atmosphere that *we* are the main contributors to our own problem with Global Warming?