Claims:

1. An electrical power generation system(20), comprising:

a hydraulic pump (22) configured to be switchable between operating in a first pump direction and in a second pump direction opposite the first pump direction;

a hydraulic motor (24) operably connected to the hydraulic pump to convert hydraulic flow (72) into electrical power, the hydraulic motor having a motor inlet passage (60) and a motor outlet passage (66); and

a hydraulic block (48) disposed in flow communication with the hydraulic pump and with the hydraulic motor, the hydraulic block configured such that hydraulic fluid flow exiting the hydraulic block toward the hydraulic motor is directed through the motor inlet passage, regardless of whether the hydraulic pump is operating in the first pump or the second pump direction.

2. The electrical power generation system of claim 1, the hydraulic block (48) including a plurality of check valves (50) interconnected with a plurality of hydraulic passages (52) to direct hydraulic fluid flow (72) through the hydraulic block.

3. The electrical power generation system of claim 2, the hydraulic block (48) including a pressure regulator (54).

4. The electrical power generation system of claim 1, further comprising a priming pump (46) operably connected to and driven by the hydraulic motor (24).

5. The electrical power generation system of claim 4, wherein the priming pump (46) is in fluid communication with a hydraulic fluid reservoir (70) to maintain a selected hydraulic fluid pressure in the electrical power generation system (20).

6. The electrical power generation system of claim 4, wherein the priming pump (46) is driven in only one direction by the hydraulic motor (24).

7. The electrical power generation system of claim 1, wherein the hydraulic motor (24) is operably connected to one or more batteries (30) to charge the one or more batteries.

8. A transportation refrigeration system, comprising:

a cargo container (16);

a refrigeration unit (18) operably connected to the cargo container to condition an interior of the cargo container; and

the electrical power generation system (20) of any preceding claim operably connected to the refrigeration unit to provide electrical power to the refrigeration unit.

9. The transportation refrigeration unit of claim 8, wherein the one or more batteries (30) are operably connected to the refrigeration unit (18) to provide electrical power to the refrigeration unit.

10. The transportation refrigeration system of claim 8, wherein the hydraulic pump (22) is driven by a rotation of a vehicle wheel (14).

11. The transportation refrigeration system of claim 10, wherein the vehicle wheel (14) is a railway car (10) wheel.