WHAT IS CLAIMED IS:

1. A well system comprising:
    a downhole-type device comprising:
        a fluid-end comprising:
            a fluid rotor configured to move or be rotated by wellbore fluids; and
            a fluid stator surrounding and supporting the fluid rotor; and
            a first bearing coupling the fluid rotor to the fluid stator; and
            a second bearing coupling the fluid rotor to the fluid stator;
        an electric machine comprising:
            an electrical rotor rotably coupled to the fluid rotor, the electric rotor configured to rotate in unison with the fluid rotor; and
            an electrical stator surrounding and supporting the electric rotor; and
    a lubrication system fluidically coupled to the downhole-type device, the lubrication system comprising:
        a topside pressure pump; and
        a downhole-type distribution manifold within a wellbore, the distribution manifold fluidically connected to the topside pressure pump, the first bearing, and the second bearing.

2. The well system of claim 1, wherein the first bearing comprises a radial ball bearing.

3. The well system of any one of the preceding claims, wherein the second bearing comprises a thrust bearing.

4. The well system of claims 1 or 3, wherein the first bearing comprises a radial bearing and a thrust bearing.

5. The well system of any one of the preceding claims, wherein the distribution manifold comprises:

a first flow restriction between the topside pressure pump and the first bearing; and

a second flow restriction, different from the first flow restriction, between the topside pressure pump and the second bearing.

6. The well system of claim 5, wherein the first flow restriction or the second flow restriction comprise a restriction orifice.

7. The well system of any one of the preceding claims, further comprising a controller configured to:

measure a parameter of the downhole-type device; and

responsive to the measured parameter, change a rate of lubrication to the first bearing or the second bearing.