

## Electrification of the Transportation Sector Study Resolution

**RESOLVED:** Shareholders request MGE Energy lead a multi-party study of the electrification of the transportation sector in the MGEE service area. The study implementation plan, omitting proprietary information, prepared at reasonable cost, completed and reported to shareholders within 12 months of the annual meeting. The study implementation plan should include the Company's strategy to supply renewable energy to the electrified transportation sector, including analysis of long and short-term impacts on carbon reduction, utilization of new company-owned renewable energy, financial and operational opportunities, and risks.

### **SUPPORTING STATEMENT:**

MGE has begun exploring electrification options, but currently it's *piecemeal*. MGE is missing a chance to jump start planning for this new market opportunity. The utility industry is changing rapidly and MGE should lead and aggressively seek new business that takes advantage of emerging opportunities in the electrical sector. Conventional industrial, commercial, and residential electrical load is remaining flat or decreasing due to new technologies, codes and standards, and price signals to use less. However, electrification of the transportation sector, including mass transit bus and rail, represents an opportunity to supply new renewable energy in the MGE territory in the years ahead. Currently, *there is no road map or coordinated strategy* to assess and move forward on this market opportunity.

Pressure to reduce carbon from the transportation sector to address climate change will intensify as the world continues to warm. According to EPRI's "Environmental Assessment of a Full Electric Transportation Portfolio" report, electricity will eventually replace approximately half of projected light and medium-duty transportation fuel use and a significant portion of non-road fuel use. Electrifying vehicles, buses, rail, and non-road equipment will lead to better air quality. The study found that greenhouse gas reduction ranged from 45% to 77% when the load was supplied with renewable energy.

The 2017 Brattle study on "Electrification, Emerging Opportunities for Utility Growth" said "to realize the full benefit of transport electrification, utilities will likely benefit from playing a **PROACTIVE** role in identifying possible social and technical systems of transmission processes needed to achieve this development rather than just reacting to the development of transport." Other assessments from the Smart Electric Power Alliance, Bloomberg, Utility Fortnightly, the Edison Electric Institute, and the US DOE have made similar assessments.

Investors require additional information on how the company is preparing for potential scenarios in which the electrification of the transportation sector, including mass transit buses and rail, is greatly increased due to climate impacts and other market drivers. The information provided in the proposed study implementation plan will allow shareholders to determine whether the company is adequately managing or seizing related opportunities.

An electrification of the transportation sector with renewable energy should be launched and led by MGE. The initiative could include recruiting local and national organizations and experts in this field to determine the technical, economic, environmental, and market impacts of electrifying the transportation sector, including mass transit buses and rail, trucks, vehicles (both fleets and passenger), and additional charging stations.