# IMPORTANT DESIGN FACTORS IN LARGE ELECTROCHEMICAL CAPACITOR SYSTEMS

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Significant advances have been reported in recent years pertaining to the development of large electrochemical capacitor systems. These large systems are now appearing because appropriate applications have been identified where capacitor storage technology offers favorable advantages and equally important, due to the availability of significant quantities of large, highly-uniform commercial capacitors at costs that are becoming commensurate with their value in the application. These large systems span the range from storage reservoirs used in heavy-hybrid vehicles to the massive bulk-energy storage systems described by electric utility companies.

This paper identifies three important design factors in the large systems, which include durability, reliability, and safety. Issues relating to these factors are discussed and comparisons are made with competitive technologies. The impact of each factor on system cost is addressed. Specific examples are used to illustrate the importance of life-cycle costs in large capacitor system applications.