Prospects of ACCC Conductor Application in the Global Energy Interconnection

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Abstract

To construct the global energy interconnection, enhancement and development of the transmission capacity, allocation capability and economics of power grids are crucial challenges. ACCC conductor(aluminum carbon fiber composite core conductor) is a promising class of conductor for the global energy interconnection. The superior strength of composite carbon core allows for the stranding of increased quantity of aluminum in trapezoidal layers with fully annealed aluminum for maximum current carrying capacity with lowest cost. This conductor offers greater capacity, superior strength, lighter weight and low thermal sag. It is also free of the corrosion associated with metal cores. ACCC conductor would be ideally suited to the challenges facing with the global energy interconnection.