

## **Abstract**

There are plenty of hydro-carbon energy resources available on earth, for hundreds of years. The urgency of sustainable energy and transportation problem stems from population, global warming, and equitable access to energy for all humanity. The way forward is to help the developing world (90% of population that dominates the future emissions) with “clean” energy, rather than making the developed world clean (the 10% solution). This has to be done by appropriate technologies, consistent with sound business plans, and market based economy. This presentation offers the engineering and economic foundations of the above proposition. Case studies of sustainable vehicles and example technologies from the author’s group at Texas A&M University will be presented as specific illustrations.