## Technical Assistance Request

Department of Energy labs, Academic research labs, private facilities and members of the American Made Challenge network may have a huge role in resolving the several aspects necessary to secure the major worldwide commercial success of JohnsWalkerWorldWide LLC's Sunflower Seating patent and development.

Producing materials which are curved to fit a seat back and seat bottom sitting area is a novel challenge, something not yet created for a mass market of millions of pre-existing sports stadium seats and the complexes where they occupy valuable real estate; stadiums which are currently unoccupied by spectators.

Angle of incidence and shading considerations, durability and new wiring, new wiring systems, connections, safety, data and best results are all areas which testing, study and observation will serve the process well.

Solving these issues will lead to terrific commercialization opportunities for homegrown domestic manufacturer's, for new sales both here and around the world, where and estimated 70,000,000 empty seats occupy space 7 days a week, 365 days a year.

Testing materials using advanced software programs designed to mimic reality; measuring the power gathered by different photovoltaic materials, understanding the currents flowing through inverters, circuits, etc., will certainly speed the process and produce positive outcomes.

This is the role that the American Made challenge seems perfectly designed to fill. Such testing is vital, as such software running these types of programs will answer many questions about design and materials before time and money are wasted.

It's every inventors dream to win a challenge like this as vouchers and partners from the American Made Network will be keys to the success.

In addition to these earlier issues, our project calls for the testing of 200 units once a high quality design has been fabricated so that real world

data can be gathered, understood, refined and implemented on a grand scale, reducing costs.

Ideally working with a leading (photovoltaic) sciences university would enhance the whole operation, boosting the universities budget, supporting enthusiastic students and post grads and providing much needed technical data with regards larger numbers of seats, shading issues, angel of incidence, wiring and electrical connector issues, individual siting concerns, safety, and electrical concerns: low amplitude, best voltage, most watts, etc., as well as fabrication of Sunflower Seats.