The Advancement of Solar Cooking

Hello my name is David Chalker. I am the founder and President of the Sun BD Corporation.

Good morning.

I would like to thank Solar Cookers International's Director Julie Greene, her staff and the convention sponsors Global Alliance for Clean Cook Stoves and the Agua Fund, Inc. for bringing together such a diverse group of knowledgeable delegates to this convention, whose interests in solar cooking spans the globe. I would also like to give another thank you this morning to Pat Mc Ardle for without her friendship I would not be here today.

Over 25 plus years ago I sent $3 to a PO Box in Arizona for plans on how to make a solar oven. It was the best $3 I ever spent. It changed my life. I would not be standing before you today if I had kept those $3 in my pocket.

Back in the 1980's when I started solar cooking, solar cooking was almost entirely a do-it-yourself (DIY) activity. If you wanted a solar oven you built it out of aluminum foil, glass and a cardboard insulated box. If you were handy you built your solar oven frame out of wood and then added some insulation.

During that time the only commercially available solar oven on the market was the Burns–Milwaukee sun oven. I had the privilege of talking to Tom Burns once, he was the founder of Burns–Milwaukee. Mr. Burns told me then and I have never forgotten it, he said almost any (DIY'er) can get to 250 degrees Fahrenheit with their home-made ovens but it takes a better design and engineering to get to 300 degrees Fahrenheit or higher. Recently Tom Burns' original sun oven design has been enhanced and improved even further by Sun Oven International. Let's give an acknowledgment to Paul Munsen for that achievement.

Of course today there are more choices in solar cooking products to choose than in the 1980's. There is Solar Cookers International's very own Cookit which has been a long standing standard in the solar cooking industry. Made of traditional cardboard the Cookit's simple panel cooker design and its low cost of manufacturing enables NGO's and localized in-country businesses to mass produce the Cookit's design allowing some of the poorest and neediest people of the world to learn how to solar cooker and cook hot foods without fire.

Another very similar panel style cooker muck like the Cookit is the HotPot solar cooker. The HotPot's tempered clear glass bowl, stainless steel black insert bowl and with foldable mirror quality aluminum reflectors it has proved to be a very reliable cooker offering a decade or more of service. The HotPot solar cooker has been used around the world.

Another popular style of solar cooker is the solar box oven. An example of that being the SOS Sport solar oven designed to be a light weight mass produced solar oven using recycled plastics. SOS Sport solar oven is made in the USA and exported around world.

Parabolic solar cookers using unique oval, round and even butterfly shaped designs have been developed and put in use all over the world. Lightweight portable designs like One Earth Design's parabolic cooker have proven successful and on the other side of the weight spectrum heavier permanent rooftop designs weighing 100 lbs or more have been developed to prevent thieves from stealing them. The parabolic solar cooker style is by far the world's most successfully used type of solar cooking device.

Hybrid solar ovens like the Tulsi-Hybrid solar oven from India and the SunFocus® solar electric oven, which I designed and manufacture here in the U.S.A., tries to solve solar cooking's Achilles Heal. How can you solar cook without solar energy? The answer is simple, combine two proven technologies into one; an engineered high performance solar box oven with that of a low wattage electric oven. The hybrid solar oven has proven itself as a best of all world solution. It is mass producible, high performance and adaptable to AC or DC electrical environments.

Most recently tube style cookers like the recently successful Kickstarter campaign for the GoSun Stove as well as other similar designs being made in China and Turkey have been introduced and are gaining attention as an easy to use solar cooking solution.

Clearly there are certainly more innovative solar cooking products than ever before but unfortunately I see five challenges that obstruct solar cooking's universal adaptation.
1. **Old perceptions:** I have noted over the years that non solar cooking people worry about clouds and weird hypothetical weather conditions to reinforce their belief that solar cooking will not work. (Then when you tell these people that no solar cooking is not possible under those conditions, they say I knew it. I stick with me grill).
2. **Lack of governmental recognition** remains an intractable problem. Is solar cooking a real solution solving technology or an interesting way to cook food? (FEMA, USAID, and the EPA apparently think it is just an interesting way to cook food and not a solution solving technology as they continue to not recognize solar cooking as a recommended cooking method solution)
3. **Limited capital investment and funding opportunities:** If you cannot find capital growth becomes impossible. (Long considered a grass root industry with a limited market solar cooking has been viewed as being a poor investment by traditional investors). One Earth Design and GoStove recently had to go the crowd funding route.
4. **Traditions**: We all know about traditions they are easy to bring up when you do not want to change and forgotten easily when a new technology comes along that benefit a person.

5. **Is one equal to all:** Let's be honest, we continue to treat all solar cooking devices as equals when we all know that there are big differences between cooking capabilities from panel cookers, box ovens, hybrid ovens, and parabolic cookers.

6. **Are we our own worst enemy:** We have brazenly urged Governments and their agencies, and Non-Governmental Organizations to recognize our repeated offers to let us help to improve countless lives with solar cookers only to have our pleas fall on deaf ears? Shortly after last year's typhoon in the Philippines I contacted Director Greene about coordinating a solar cooking humanitarian solar cooking solution. I emailed a high level person at FEMA in Washington and advised that I had 1000 solar cookers capable of feeding (I was being conservative) 5,000 people available for immediate dispatch. The email letter I received back from this person was - Thanks but no thanks. The reason given was FEMA uses local aid resources first. As I am reading this email I am seeing on TV where the Manila Airport is standing room only with relief supplies being transported in from the United States primarily from FEMA. Are we to the point were any solar cooking solution offered prompts an immediate response - Thanks but no thanks. Why, is that? Have we as an industry over promised what solar cooking technology can do and not delivered on those promises? Have we given ourselves our own questionable reputation? I think these are all fair question to ask ourselves?

It is hard for me to believe that more than a quarter of a century has passed by since my own solar cooking journey started and all because I was interested enough, motivated enough and confident enough in my carpentry skills to build a solar oven. I was entrepreneurial enough to start my own solar business to introduce the only hybrid solar oven sold in North American and driven enough to design and manufacture my own solar electric oven. You could say, I'm a been-there and done-that kind of person. I am looking forward to meeting many new solar cooking friends during this convention. My gut tells me that this convention has the potential to be solar cooking's bright new day.

Thank You,