



Solar Energy developments – How much does it cost to make it “in”?

First impression report

By Wsewolod Rusow

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This is a first impression report from the combined conference and exhibition - InterSolar North America and Energy Storage North America 2023. This event is one of the most essential ones in North America, if it comes to renewable energy in general and to usage of solar energy in particular.

Needless to say, that this event enjoys the highest attention in the market. Any manufacturer, service provider or consultant doing, or wishing to do, “solar business” on the North American continent is in Long Beach, CA this week. Just like potential customers or future partners, together with other energy experts, we filled the halls of the local Convention Center.

Even if the location in Long Beach provides the cozy feeling of close neighborhoods, the event is for California only – it is definitely global. The two topics (solar and energy storage) are merged not by accident. In fact, those two branches have grown together and not only stand for the same goals – the renewable industry sector has understood that both technologies are required to accomplish energy transition.

The interest is extremely high and the reasons are more than obvious – energy has occupied the headlines for months. Moreover, while it is still going on, two important insights emerged almost immediately and one would like to share them right away.

The first observation is about the maturity level of the technology. Regardless what you knew or believed to know, solar energy is not rocket science any more. Everything from the endless panels’ fields along your roads to the charging socket for an EV in your garage - is technology of the shelf now – feasible / available / sustainable. There are no prototypes anymore; there are full-scale production lines, established across the world. Businesses offer “ready to go” solutions designed to customers’ requirements. Looking at the piles of batteries and endless fields of panels, one might wonder, why we do not see it everywhere, like street hydrants or mailboxes.

Without going into the economic components right now, it is important to explain, why we think the technology is ready, or rather why the market is ready to meet all the customer’s requirements. It is simple, it is the number of service providers and companies that cater or serve to the secondary needs of the industry.

Be it repair or maintenance, remanufacturing, recycling or disposal, planning or operations - all these tasks find a significant number of contractors. More importantly, each of these contractors have their own products or processes already developed and available. Do you operate several huge and remote solar farms and worry about cleaning the panels? No problem, remote-controlled or autonomous robots might be able to take over this task. You don't come from the energy industry yourself, but would like to invest in the solar systems in order to secure economic or tax advantages - no problem, external consultants can adapt explicit solutions to your needs and other operators could take over the operation to ensure optimal utilization. In other words - the industry seems to be ready for energy transition, for real.

Well, here comes the second observation, which is about the origin of the presented products or more generally about the chain of supply feeding all those innovative solutions.

This observation also provoked the current title, because one of the exhibitors for example, advertised with the slogan: "Made for USA" and by doing that, made us think - what would be necessary to be able to advertise with the phrase "Made in USA"... In the broadest sense, it is about dependencies in the energy sector (again). Fact is that every OEM was trying to bring it (their commitments) to first lines – manufactured / designed / engineered in the US – whenever feasible. However, if we would break down the supply chains for sub-contractors and spare parts or raw materials – the trace is heading towards Asia and at the end about 2/3 or more of the interviewed OEMs are depended on out-of-the-alliance suppliers up to the level of essential.

Right now, we do not feel the pressure of dependency, because this technology has not penetrated our public and commercial domains deep and wide enough yet. Energy storages are unique, either large or medium (residential) scale, e-mobility is still the upper minority and not the average but the dependency is there and should not be underestimated. When energy becomes luxury - norms and values that were believed to be secure begin to falter.

Just to round up with motivating picture:

- Solar Industry is ready to contribute to the global Energy Transition – to the more energy secured future. It is awaiting clear signals from the customers.
- Renewable energy is vulnerable to the common market practices and requires close attention from governments, who are responsible for improving Energy Security to their Nations.

One single exhibitor labeled its products with “Made in USA from 2024”; ideally, the competitors will pick it up.