Thinking small to make it big

PES caught up with Dr. Daniel Faltermeier, Founder and Managing Partner of helioconsult, to see how the pandemic and its aftermath has impacted the market for small scale renewable energy systems. Could flexibility hold the key to high market demand in this sector?

PES: Welcome to PES Daniel, it's great to meet you again. Perhaps we can start off with an introduction to helioconsult and an overview of what you do?

Dr. Daniel Faltermeier: Thank you for having me. It is always a pleasure to talk to you.

helioconsult is a German based independent engineering provider for any type of renewable energy systems. Because of a high market demand in the last couple of years, we are currently most focused on photovoltaics (PV).

Also, the background of our employees is mainly in PV. Most of us have been in the business already for decades, so you could say this is our sweet spot.

With our services we help to decrease the technical and financial risks for our customers, developing, erecting, operating or investing in renewable energy systems. Our customers come from different sides of the spectrum. For example, on the one hand, we work for large investors and banks, for large system in the multi-MWp-range, but also for small private companies investing in small commercial rooftop projects.

In fact, for smaller systems up to 750kWp, we have developed a highly standardized bundle of services which are highly flexible and cost efficient, so customers in this range can also have access to advanced quality services, which are usually only common for large scale projects.

PES: Is the focus of your business primarily commercial PV systems?

DF: The answer to this question is yes and no. Because of the situation during the last year, with travel restrictions and so on, we had to focus even more on the local German market. Due to our already existent approach to smaller systems, we were able to adjust very quickly, as our international business with large projects has decreased during the pandemic.

But this brought us very quickly in the position to become one of the leading providers for this segment in Germany. So, you can say currently our business in primarily focused on commercial PV systems. From the current standpoint, we will keep this approach, but large-scale systems will be in focus later again.

PES: It would be great to hear about the approach you take to this in Germany where you're based.

DF: In Germany most smaller systems still get a guaranteed feed-in-tariff under Germany's renewable Energy Act. Because of the accompanying regulations, commercial project size is limited to 750 kWp, or it is necessary to go through an auction process to build larger energy installations. This is slowly beginning to change, and the market is slowly converting to Power Purchase Agreements, which allow more flexibility, as well as larger project sizes.

With our consulting and engineering services we can provide the right product for both worlds. Our yield analyses, due diligence process and technical inspection services are highly flexible and adaptable. This means we are able to provide our customers with the exact service they need for their project size.

As I said earlier, with a highly standardized and

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very efficient process for even smaller systems, we can offer a fast, reliable and cost-efficient service.

PES: How do you think this could also be applied to other countries, perhaps in Europe but also worldwide?

DF: Because our services are very flexible, we can easily bring those to other markets. The critical part here is travel costs. When you think about smaller installations and service costs in the range of around 2,000 EUR per project. This could be solved with trained and certified local partners, but also by bundling projects in a region.

This is already something we do in Germany to get individual travel costs down for our customers. So, the approach would be pretty comparable and something we are looking forward to doing in the coming years.

PES: We'd love to hear about some of your current projects.

DF: Beside our quality services we deliver a couple of hundred projects a year, we also support some of our large customers with project management. Currently we coordinate the finalization of projects, which have had problems in the past for different reasons. For example, because the original EPC was not able or willing to finalize them. This goes from support for tender process to finding a new EPC up to tracking the project progress.

PES: What kind of benefits are there for small businesses and small commercial solar systems in using your services, as opposed to large PV systems?

DF: The benefits are in general the same. In both cases customers get a lower financial and technical risk for their investment. The main difference is the price for these services.

A complete quality services package for large scale PV systems are usually in the range of a couple ten thousand Euros, which is clearly too expansive for smaller projects. But there

is a reason, why there is such a high price tag, which is the same when we are providing our services for those segments.

So, the initial question, is there a way to standardize and adapt the large-scale products in a way that the customer still gets a reliable service, but for less money.

And the answer to this is yes. By adapting these services to the specific needs of smaller systems, we can still provide a bankable product, which fits the individual needs of our customers.

PES: As the move towards a more sustainable future continues, are smaller scale solar projects becoming much more common?

DF: Decentralized smaller systems, localized at the consumers' location are possible, and centralized large-scale installations are both important for a successful renewable energy concept.

There is still a large scope of areas which can be covered with PV for decentralized projects. By the way, one great advantage of renewable energy systems, is to convert sunlight into electrical energy at the location where it is actually needed.

So, clearly I would see an increase in smaller systems over the next years. But also, there must be an increase of centralized large scale solar and wind systems, to cover the demand of energy for the industry, electromobility and people living in cities with no place for their own systems.

PES: What are some of the common challenges that small commercial systems face. Do they tend to differ from larger scale projects?

DF: Decentralized smaller systems now come with a more complex grid- management and stabilization process. A reason why grid operators were not thrilled with the idea of renewable systems at the beginning.

Providing an infrastructure which allows a safe and stable use of those decentralized systems is nevertheless key. But this is more a task for the regulation body and the grid operators.

From the investors point of view, the challenges are more in finding a trustworthy and competent partner to plan and build their new system. For example, often the yield

calculations from the EPCs are not very exact. If those specific yields are used for the business model, this could cost the margin, or even lead to a loss over time.

PES: How does helioconsult help to overcome these?

DF: Especially regarding the last point, we offer our customers, with our due diligence process and the included yield assessment, a reliable prediction of the base parameters for their business models in the planning phase of the project.

During our on-site technical inspection, once the system is built, we are able to identify problems and circumstances which can lead to a lower yield than calculated and this means we can adjust the existing yield calculations. This also includes, for example, thermal drone imaging and electrical measurements during the inspection for each project size.

PES: How important is flexibility in your job? We would imagine it's something that goes hand in hand with speed and reliability?

DF: Absolutely! We often get calls from new customers with time critical demands. It is not uncommon for us, that there are less than 2 weeks between the assignment and the final report. In most cases we are even faster. Luckily our internal structure and standardization allows us to have this high flexibility. Probably something that sets us apart from other competitors.

PES: Do you support big global players in the market too?

DF: Sure, with our given range of services we can work with everyone from the private to large institutional international players and EPC companies.

Currently we are supporting companies with projects in the MWp-range in different countries all around the world, as well as in our home market Germany. Added to this are the large investors with project portfolios with more than 100 projects up to 750 kWp.

PES: Are you seeing high demand for your services? Has business been impacted by the pandemic at all?

DF: Yes, business is going really well. As I mentioned earlier, due to international travel restrictions, we are kind of limited in our international business, where there is a need for a physical presence.

However, services like our due diligence or yield analyzes, which can be done from any place in the world, is still growing.

Luckily, we were also able to increase our business in our home market, which more than compensates a lower international income.

Also from our internal structure, decentralized home office work was the standard even before the pandemic. So, we were able to adapt pretty fast to the situation, which will hopefully get back to "normal" soon.

PES: So, what's next for helioconsult? Have you plans to extend your services to the European market perhaps?

DF: Right now, we are still very busy with our current projects, but we clearly want to bring our unique services for commercial systems to the nearby countries as fast as possible. We already have some partners in different European countries, which allows us to target those markets for example like Italy, Spain, France, Netherlands and Sweden already or very soon. Fingers crossed, helioconsult's success story will continue in far into the future.

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