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# Expansion and bankability need to go hand in hand for CPV

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As the CPV sector comes to grips with a slowdown in the US and Europe, it sees the expediency required to get pilot systems on the ground in markets such as Saudi Arabia, South Africa and China to strengthen its bankability.

*By Ritesh Gupta*

Acceptance and hold-ups, expansions and closures are all part and parcel of any renewable energy technology's journey.

CPV, as an upcoming solar technology, has had its share of ups and downs in the last year or so, but those entities that are expanding, definitely promise to take the sector to a new level.

It is acknowledged that CPV has struggled lately due to fast price decline for standard PV panels. The key miscalculation of CPV players has been that they skated where the focus (i.e., cost of PV panels) has been, rather than where it is going to be. Together with the lack of bankability, this has led to only a very low market penetration of CPV so far, says Nikolai Dobrott, managing partner, Apricum – The Cleantech Advisory.

"However, we expect that PV pricing will more or less plateau short- to mid-term, which may give CPV players the unique opportunity to gain market share, but only if they reach the very demanding price points necessary and if they crack the bankability issue," says Dobrott.

**Emergence of New Markets**

Another unique opportunity is currently provided by the emergence of markets in the Middle East, such as Saudi Arabia, where CPV could not only benefit from high direct solar irradiation, but also from the potential to localise manufacturing.

“In any case, it will definitely continue to be a tough battle for the CPV industry, with many companies yet to go out of business. Among all players, we are looking with particular interest at what Soitec is doing, which has many large-scale projects in the pipeline, has reached some economies of scale in manufacturing, and has sufficient corporate backing to finance its market entry,” says Dobrott.

***"We have CPV installations worldwide in 14 countries at the moment and we are expecting a significant growth of the CPV market in several high DNI regions,” says Hansjörg Lerchenmüller, general manager of Soitec Solar.***

For its part, Soitec emphatically states that it is expanding its CPV business. The company recently finalised a $108m bond for its 44MW Touwsrivier project in South Africa. This is the first publicly-listed project bond ever issued to finance a solar power plant based on CPV technology.

“In the US, we have a project pipeline of 300 MW with signed PPAs. Therefore, we opened a new factory in San Diego towards the end of 2012. The factory is designed to reach 280 MW at full production. 140 MW are already operational. In South Africa, we are about to launch the construction of the 44 MW project. We have CPV installations worldwide in 14 countries at the moment and we are expecting a significant growth of the CPV market in several high DNI regions,” says Hansjörg Lerchenmüller, Senior Vice President Product Strategy of Soitec Solar Division.

**Field Experience that will boost bankability**

While expansion can be owing to several positive attributes, the CPV sector should look at proving its promise on an ongoing basis.

Field experience is one of the most important factors to ensure high-levels of adoption and expansion of the CPV market. Successful data showing consistent and long-term performance track record from Amonix’s large Cogentrix deployment and others including Suncore and Soitec will demonstrate the ruggedness and reliability of CPV while providing comfort and justification for larger projects in the future.

One of the biggest challenges for the CPV sector is the bankability of systems in new environments, especially in the upcoming markets of the Middle East, which are an attractive target market for CPV companies due to potential for high DNI, says Dobrott.

“By having good field data, arranging the project financing for the project will be much easier. This underlines how crucial it is for CPV companies to get pilot systems on the ground as quickly as possible,” he says.

**US slowdown**

Other than Spain, where current sentiments are expectedly bearish, the US market is going slow due to the financial markets’ conservatism due to lack of clarity on the worldwide macroeconomic situation.

Other countries and regions, such as China and MENA (Saudi Arabia) are leading adoption of the technology and will be the short-term leaders.

At the same time, once the new technology risk is further retired, then CPV has a chance to take its place as the LCOE leader. There is a risk though that CPV remains a nascent technology without people driving the technology as much as possible domestically in the interim.

The major hurdle, no different than other new PV technologies, is securing both funding and project finance from lenders. Due to the current macroeconomic situation, financiers have become exceeding conservative for project financing limiting adoption. This adoption limit trickles down to stunts future projects in CPV. Some companies are self-funding – building the plant themselves and flipping the project for sale to a solar plant owner / operator - and others are securing creative financing.

**Combatting Risk**

Dobrott points out that the entire CPV value chain is riddled with chicken-and-egg situations. The perceived risk of a new technology gets increased by the financial weakness of most system manufacturers, with operators legitimately worrying about warranties and maintenance contracts. Most of the component suppliers like cell manufacturers do not have lot of visibility into the future and hence cannot work on capacity expansions required to reach economies of scale and push cost down, he says. Also with many companies facing liquidity issues, financing working capital is not easy for many CPV manufacturers.

All of these factors lead to increased risk margins and costs. For a plant operator, with an existing CPV plant, there is quite little that can be done if a crucial supplier or warrantor goes down except for hoping the system survives throughout its designated lifetime.

Dobrott says warranty risks can be reduced by requiring CPV companies to take direct stakes in the projects. Also ramping up the project in phases with more relevant field data from initial systems can help operator to reduce its risk. Supply chain risks can be tackled if CPV companies work closely with suppliers to reduce the capital expenditure and working capital requirements, which will help to manage the liquidity in this environment.

For future projects, plant developers need to look at the supplier risk and might need to make some prepayments to ensure that suppliers get the required commitment to expand the supply to meet the demand from future projects, recommends Dobrott.