

EMERGING PV MARKETS

SUCCESS ON NEW TERRAIN

The booming regions of the world's sunbelt are attractive for large-scale PV projects

Investing in solar energy, especially PV power plants, offers the best development prospects in countries such as South Africa, India, Chile, Mexico or in the Middle East. This is due to the significant increase in energy demand and the favorable climate in such regions. The highly populated countries within the global sunbelt need more and more energy to supply their booming economies. In fact, a great deal more energy is needed than can actually be produced, a situation further complicated by the steep rise in electricity prices for conventional energy sources.

So why not take full advantage of the solar energy to expand the electricity supply? A supply that not only preserves the environment and conserves resources, but is already capable of achieving grid parity in some countries and will soon be significantly cheaper than conventional energy sources in terms of price per kWh? While the established markets for renew-

able energies are currently in a transition phase due to government subsidy cutbacks, the decline in solar panel prices and company insolvencies, the entire solar sector is now focused on emerging markets.

Business success in these markets requires technologically advanced products and system solutions combined with long-standing experience and a solid company structure with global reach. Despite the lack of state subsidies, clear regulations, and pervasive bureaucratic hurdles, power plant owners and investors can achieve high yields and a secure cash flow.



2 MW PV power plant Pierrefonds, La Réunion, implemented by Akvo Energy (inverters: Sunny Central 500HE)

MASTERING CHALLENGES TOGETHER

Quality and experience to overcome various obstacles

Emerging markets bring a host of challenges for the effective planning, implementation and operation of PV power plants.

Complicated bureaucracy

PV projects in emerging markets must first contend with a lack of political understanding, laws and regulations in the renewable energy sector. Additional factors with a significant impact, especially on a financial basis, are complicated bureaucracies, different business cultures as well as infrastructural shortcomings.

Unstable power distribution grids

Additional difficulties involve unresolved issues regarding grid stability, feed-in regulations and grid management capabilities of large-scale PV power plants. In such cases close cooperation is the only way to build trust and seize new opportunities. SMA employees are active around

the world in helping define and establish requirements and standards through direct communication with electric utility companies and government authorities.

Changing environmental conditions

Difficult climates often require specially designed inverters and other PV components. Temperatures of over 50 degrees Celsius or far below freezing, sand and dust, humidity combined with corrosive effects of salty air and special requirements in high altitudes or during the monsoon season are all influences, inverters must be able to withstand.

Trust in the specialist

The SMA Solar Technology AG has been supplying inverters and leading system solutions for PV power plants with different architectures and sizes on a global scale for over 30 years.

We are the world market leader with over 5 500 employees and over 23 gigawatts of installed PV capacity worldwide. The SMA provides high quality products and technical expertise in any of its 20 subsidiaries located in 19 different countries on five continents.

Security during the planning phase

Quality and know-how are not only critical for products, system solutions and the implementation of PV projects, but also provide our partners with peace of mind during the planning phase and in technical questions.



Reliable system solutions that offer the best performance: Compact MV Power Platform, Sunny String-Monitor, Sunny Tripower Project, Sunny Central CP XT, Transformer Compact Station, MV Power Station and SMA Power Plant Controller

PV POWER ON ITS WAY

India, South Africa and Chile – three emerging PV markets



INDIA 

1.2 billion inhabitants
3 287 590 square kilometers
300 sunny days per year
8.5% economic growth

Target: 20 GW of solar power by 2022

Challenge: extremely varied climates, infrastructure, grid management capabilities

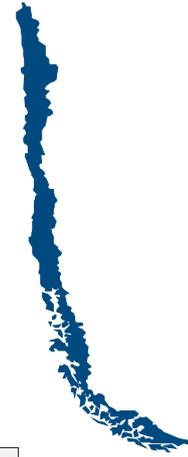


SOUTH AFRICA 

50 million inhabitants
1 219 090 square kilometers
320 sunny days per year
3.1% economic growth

Target: 8.4 GW of solar power by 2030

Challenge: climate, infrastructure, grid stability



CHILE 

17.3 million inhabitants
756 946 square kilometers
310 sunny days per year
6% economic growth

Target: 7 GW of energy growth by 2020, mainly from renewable energy sources

Challenge: heat, extreme altitudes, grid capacity

HOW CAN SMA WIN CURRENTLY UNSUBSIDIZED MARKETS FOR SOLAR ENERGY?

Three questions to Oussama Chehab, Vice President Emerging Markets at SMA

Why are emerging markets interested in PV power?

Many countries are turning to solar technology and renewable energy because of a need for alternative energy sources and environmental concerns. In this regard, Germany is seen as a trendsetter and SMA as a company whose proven technologies exceed any comparable products offered by competitors.

What are the first steps in winning new markets?

The first step is to determine energy demand and any problems associated with the energy supply. Participating in delegation tours and trade shows allows on-site

contact with government agencies and partners. Training seminars and workshops about SMA products help dispel any misconceptions regarding PV energy among political and economic decision-makers and create a positive experience with SMA.

How important are quality and experience for the success of PV projects?

The certainty of having a partner that will assist you before, during and after a PV project forms the basis for effective collaboration. The experience SMA has in PV power plant projects, our long list of satisfied customers across the globe and our excellent service and training seminars at the SMA Solar Academy show customers

the level of quality, professional competence and security they will receive from the company. In addition, we can also support with solutions and financial security through banks.



Oussama Chehab

FOCUSSING ON QUALITY AND INNOVATION

Energy management and power storage solutions are the future

The balance of power is shifting in the solar sector. So far Europe and North America have been the focus, but now countries located in the global sunbelt are taking the spotlight. To ensure the success of PV projects in emerging markets, competence in terms of grid stability and energy management is paramount. The future of PV plant design will be centered almost exclusively on cost-efficiency and financeability rather than subsidy tariffs.

SMA offers superior technical solutions for meeting climatic and structural challenges. Generating energy from a combination of renewable energies and fossil fuels is not new for SMA. For more than 30 years, our engineers have been working on projects with hybrid solutions. Today SMA is able to offer intelligent, efficient and cost-effective systems globally.

In the sunbelt regions there is often a demand for integrated energy systems rather than single product solutions. In particular, the market for decentralized energy systems as an alternative to grid power is booming. Complex system solutions are required to complement or even substitute

diesel generators, which are used to power entire industries in some regions.

PV diesel hybrid solutions and power storage technologies are the way of the future for these areas because, thanks to its low cost per kWh, solar energy offers the best alternative to conventional energy types.

SMA can rely on more than 30 years of market leadership to help create innovations in the area of smart grids, energy management, hybrid and storage solutions. This market leadership is accompanied by a solid global corporate structure and a deep understanding of the political, economic and social conditions in emerging markets.



Decentralized energy supply is key for remote areas in sunbelt regions

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