

# **VDE–ISE Pte. Ltd.**

## **Script Press Conference**

At the opening of full solar services  
by New Energy Technology (NET) and SERIS

January 18, 2010

Singapore

## **Introduction of Company and the Services**

by

Henry Paetz

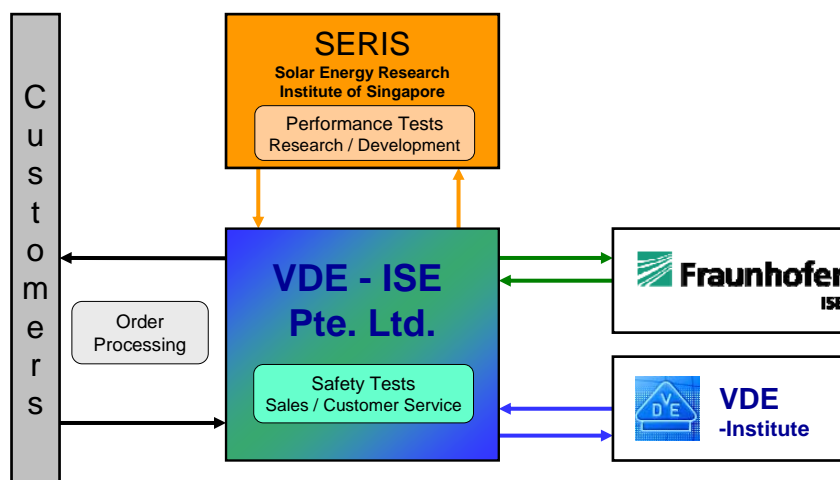
Managing Director of the  
VDE–ISE Pte. Ltd.

January 18, 2010, Singapore

## Introduction

Let me introduce myself. I am Henry Paetz, Managing Director of the Company VDE–ISE Private Limited in Singapore. My studies in economics and power engineering at BTU in Germany and my experience and knowledge in sales and product management in the last 7 years will help me in my task to establish the Company in Asia, to coordinate and to optimise the testing projects and to ensure our service on a high level of quality of our service.

## VDE-ISE Pte. Ltd. and the Cooperation Partners



VDE–ISE was established in October 2008 by:

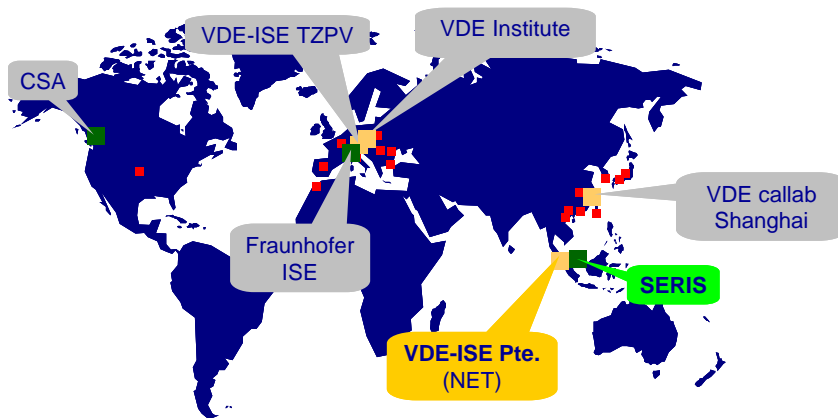
- VDE Testing and Certification Institute and the
- Fraunhofer Institute for Solar Energy Systems (ISE),

who are both acting as shareholders in the VDE-ISE.

The task of VDE-ISE is to provide product testing and certification, coordination of factory inspections and support of customised solutions in the field of photovoltaic.

For the testing in according to the international standards, the VDE–ISE is working hand in hand with the cooperation partner Solar Energy Research Institute of Singapore (SERIS).

The centralization of the testing and certification know-how and service in Singapore is possible through the strong support of Fraunhofer ISE and VDE and their knowledge transfer to the Singapore region.



- VDE branches for Photovoltaics
- Cooperation partners
- VDE local offices

By having the main office in Singapore VDE-ISE can provide services to customers and sales activities in China, India, Thailand, Korea, Taiwan, Singapore, Indonesia and Malaysia.

By means of our global network with other VDE local sales offices and cooperation partners we are proud to show the following strengths:

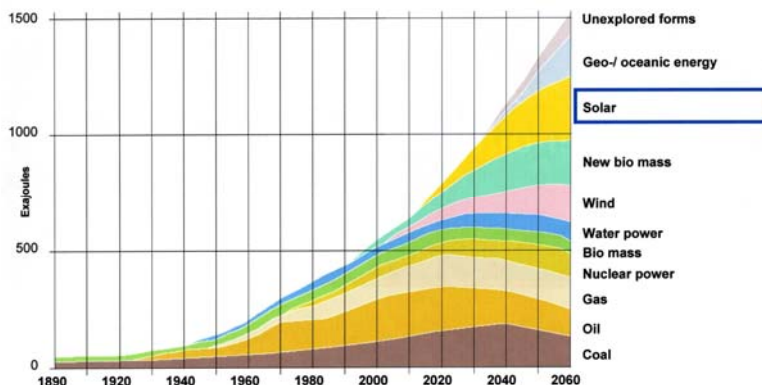
- High level of technical knowledge and expertise
- Knowledge of international standards
- Experience in testing and certification since 1920
- Low fluctuation rates of service orders and contracts
- High market penetration in Europe
- Good brand image and high estimation worldwide
- Reliable leadtime for the testing and certification process
- Excellent network of qualified R&D and service partners such as SERIS, Fraunhofer ISE and CSA

Why are we here?

## Global View about Asia market and global price trend

We expect that the main growth of the energy demands will be in Asia in the next decades.

### World Energy Demand until 2060: Energy needs about more than 250 ExaJoules for Solar only

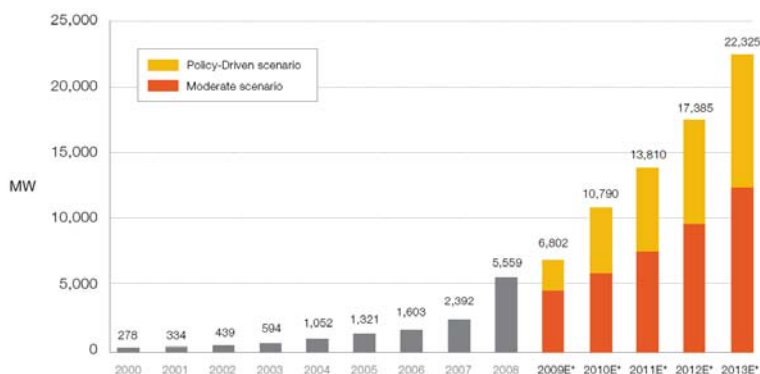


Source: Shell 2009

Let us look into the current energy needs. The power demand is rising rapidly worldwide. The actual forecast until 2060 shows us a rate of approximately 150% growth from today, especially in India and China. The share of solar energy used is expected to grow up from approximately less than 1% today to 16% in 2060.

The challenge is to deliver this energy around the world at the right time with a high level of reliability, particularly with no further environmental pollution and at low costs.

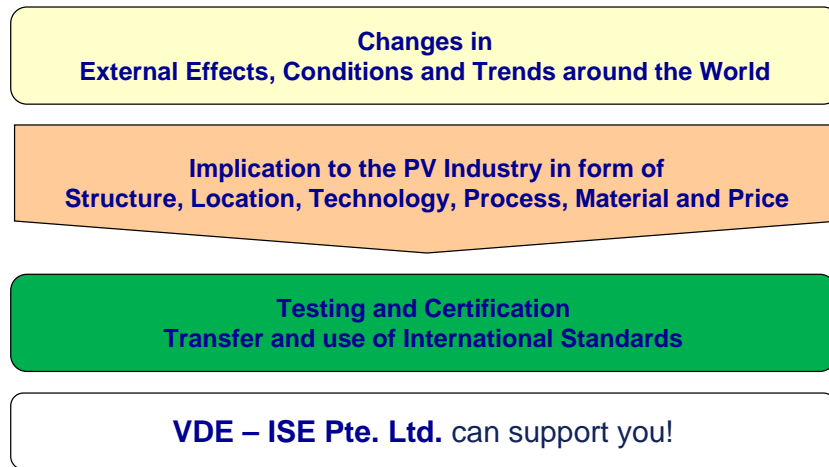
### Worldwide market forecast about installed PV capacity by 22 GigaWatt until 2013



\*Estimated  
Source: European PV Industry Association, 2009

The expected installed PV capacity worldwide is showing us – in case of further policy driven scenario – a continuous high rate of installed PV capacity worldwide.

## Elements of influence



The global market is in the process of consolidation.

Global companies most probably will expand vertically, i.e. through:

- integration or support of financing and projection of PV power plants and
- integration of suppliers or of the application markets (e.g. military, mobile electronic systems, outdoor, etc.).

In summary, the implementation of new technologies (like logic elements, improvements of production processes or technologies), the substitution of materials and the customer needs (such as in design, quality, application, ergonomics and handling) in sum will open new application areas for smaller PV companies. We can expect the diversification and the penetration of new products and brands in the near future.

This development leads to modifications of the international standards.

In consequence, the full certification or re-testing becomes a necessity.

How can we support you?

## **Service**

- ✓ Testing and Certification for PV Modules according to the International Standards IEC 61215, 61646 and 61730
- ✓ International Certification within the frame of the IECCEB CB-Scheme
- ✓ Coordination of the Certification according to PV-GAP Program
- ✓ Certification for the North-American Market through the cooperation with the Canadian Standards Association (CSA)
- ✓ Testing of Components for PV Modules
- ✓ Testing and Certification of PV Inverters according to national and international Standards
- ✓ Pre-Shipment Inspection and Calibration of Reference Modules in the VDE CalLab, Shanghai
- ✓ Performance Test of PV Power Plants
- ✓ Environmental Test
- ✓ Support for the CE Declaration

VDE-ISE and SERIS with their laboratories in Singapore are able to offer the whole range of IEC testing and certification for solar modules and safety tests.

We are able to test PV products with high requirements in quality and reliability in a short period of time. That's how we enable the producer to penetrate the PV market rapidly.

Examples are the Temperature Test, the Reverse Current Test, Humidity Freeze Test, the Module Breakage Test, etc.

In addition to the IEC certification, we are able to offer the international certification in the frame of the IECCEB CB-Scheme, the international acceptance of reports based on a standard form, and the certification according to the PV-GAP Program.

We can do also coordinate the certification for the North-American Market, in cooperation with our partner, the Canadian Standards Association (CSA).

Through our global network, we are able to manage the safety tests for PV Power plants, Pre-Shipment Tests, testing and certification of PV Inverters, periodical factory inspections to ensure the high level of product quality, QM Systems etc.

That's how we intend to support your businesses.

The partner for you!