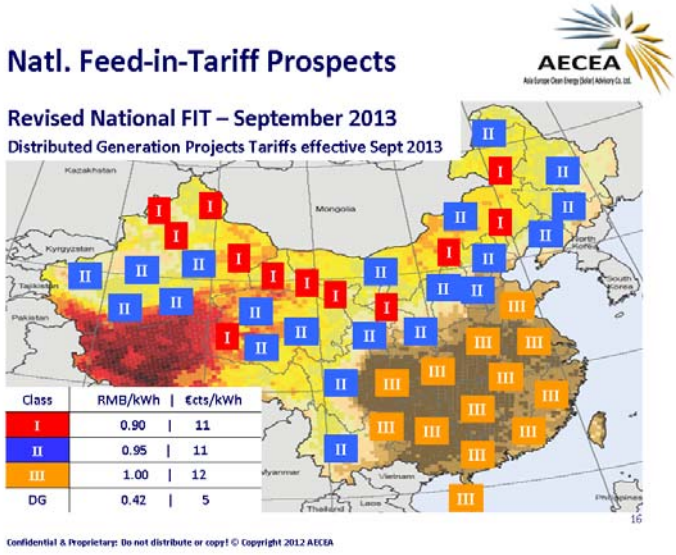
Sept. 2013 – Briefing-Paper – China Solar PV Development

National Feed-in-Tariff for Photovoltaic Revised and Effective since September 1, 2013

August 30, 2013 the National Development and Reform Commission (NDRC) and the National Energy Administration (NEA) announced that a new set of Feed-in-Tariffs (FIT) for photovoltaic systems will become effective from September 1, 2013. Accordingly, the so far single national Feed-in-Tariff (FIT) for photovoltaic systems, regardless of application type, capacity and location in place since August 2011 has been abolished. The level of the new FIT's is determined by the level of the solar irradiation in a given location throughout the entire country and feature three different levels for ground-mounted systems. In an attempt to prevent further future stress on the existing grid infrastructure in the country the central government additionally introduced a new FIT for projects designed to feature distributed power generation (DG). In this context, already last year the State Grid Corporation released in a statement that such projects aiming at both on-site generation and on-site consumption with a capacity of up to 6 MW will be exempted from paying any grid connection fee. The new FIT applicable for both types of power generation projects will be granted for 20 years according to the official notification.



Early January 2013 the NDRC announced this year alone 10 GW of PV power generation capacities shall be installed. However, given the fact that the revised FIT support scheme came into effect relatively late, caused by the on-going bilateral negotiations between China and the European Commission (EC) concerning the solar trade dispute, AECEA is of the opinion that during 2013 rather 6-7 GW and under an optimistic scenario 7-8 GW will be installed. Ground-mounted or utility-scale PV power plants will continue to dominate the domestic market; however by Q1-2/2014 the effect of the central governments decision to encourage distributed projects will be clearly visible.

Ministry for Industry and Information Technology released PV Industry Restructuring Regulations

On September 16, 2013 the Ministry for Industry and Information Technology (MIIT) published an official notification outlining regulations and standards designed to ensure a more sustainable and healthy development of China's PV Industry. Among these new regulations and standards are:

- Strictly control the expansion of existing production capacities
- Any form of production expansion requires a share of private equity of 20%
- An annual budget earmarked for R&D shall be equivalent to 3% of the companies turnover, but no less than approx. EUR 1.2 million / annually
- Minimum requirements for production capacities along the entire value chain
- Environmental Benchmarks for finished products to be met during production
- Benchmarks in terms of cell efficiencies for all types of solar cells
- Requires compliance with a host of corresponding standards and mandatory certification schemes

The above briefly illustrated new regulations will come into effect around mid of October 2013. Overall, the intention is that only the most competitive companies shall prevail, that only high-efficient products shall leave factory gates, and that only these companies who can afford to spend the mandatory EUR 1.2 Mio / annually for R&D undertakings shall sustain whereas others may simply exit the market.

In this context, AECEA remains highly cautions by when these requirements will actually result in any form of consolidation and/or reduction of existing production capacities since many other industries in China e.g. steel, cement, pulp & paper, textile, automobile are chronically facing similar issues for several years already and to date the central government achieved a mixed success in addressing the prevailing over-capacities in these industrial sectors. AECEA is of the opinion that the "desired" industry consolidation may take another 3-5 years.

Ministry of Finance announced that Manufacturer are subject to 50% VAT Rebate

According to a notification issued by the Ministry of Finance (MOF), as of October 1, 2013 operators of solar PV power plants are eligible for a 50% VAT refund/rebate until December 31, 2015. The instruction to grant a 50% rebate was decided by the State Council earlier. The termination of the VAT rebate coincides which the end of the 12th Five-Year-Plan Period (2011-2015). Today China's VAT amounts to 17% and a 50% reduction will certainly improve financial returns of companies operating in the downstream sector in particular. However, at this stage further details on how the VAT rebate will be implemented remains vague. AECEA expects that further details or guidelines about how to apply will be released shortly.

Standing Committee of the National People's Congress reported on the Enforcement of China's Renewable Energy Promotion Law

Late August the Standing Committee of the 12th National People's Congress (NPC) released upon concluding an inspection tour on the implementation and enforcement of China's Renewable Energy Promotion Law in Beijing, Gansu, Guangdong, Hebei, Heilongjiang, Hubei, Inner Mongolia, Jiangsu, Jilin, Shandong, Sichuan, Xinjiang, and Yunnan, its official report.

The Renewable Energy Promotion Law was adopted in February 2005 (effective since Jan 1, 2006) and revised by the 11th NPC in December 2009 (effective since April 1, 2010). The report specifically mentioned that a greater coordination of planning activities on the national level and planning measures on the provincial level offer room for improvement, due to the fact the provincial ambitions exceeded targets set on the national level, thus causing in particular grid connection and curtailment issues. In certain regions e.g. the wind power curtailment amounts to up to 40% and on average 17% throughout 2012. Between 2006 and 2012 the annual growth rate of wind power installations achieved an average of 76%. Surprisingly the report stipulates that by the end of 2012 PV installations amounted to just 6.5 GW which is 500 MW less than so far communicated by the National Energy Administration. At the same time, China was home to approx. 258 million square meter of installed Solar Water Heater (SWH).

The report stressed further the importance of continued R&D related efforts, allowing its domestic industry not only to maintain its present position compared to its international peers but as well to further advance. The report emphasized that in some industrial areas large quantities of key technologies still needs to be imported. According to the report the established Renewable Energy Development Fund designed to help the government to meet its financial obligations amounted to approx. EUR 20 billion in 2012. In this context the report mentioned that a sound pricing policy is necessary.

Renewable Energy Power Surcharge Further Increased

Late August the National Development and Reform Commission (NDRC) announced that the national power surcharge from currently RMB 0.008 will increase to RMB 0.015/kWh (€ 0.001-0.002) effective from September 25, 2013. The collected money will be allocated to the Renewable Energy Development Fund designed to allow the central and provincial government to pay the Feed-in-Tariffs for all types of deployed renewable energy technologies. At the same time NDRC decided to raise subsidies for thermal power plants using equipment designed to cut nitrogen dioxide emissions from presently RMB 0.008 to RMB 0.01/kWh.

China plans to create further demand for PV in the Building Sector until 2015

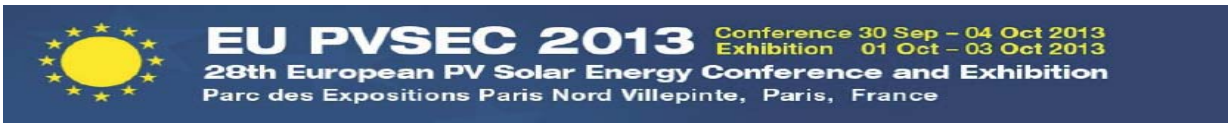
Early August 2013 the State Council of China published comprehensive policy measures designed to further support the development of it's domestic green industries. Accordingly, by the end of 2015 the total output value of the Chinese environmental protection industry shall amount to approx. EUR 54 billion. In the context of the so-called "Green Building Sector" by 2015 approx. 60 million square meters of mainly public buildings shall be turned into energy-saving buildings and solar energy applications are the only renewable energy technology explicitly stipulated as a means of decentralized / distributed power generation in the official policy document.

China is home to 3 utility-scale LCPV Projects

US based manufacturer of "Low Concentrating Photovoltaic" modules Solaria teamed up with local Chinese power utilities earlier this year, in order to develop in total 3 projects with capacities ranging from 500 kWp to 2 MWp spread across two provinces in Western China. All systems have been connected to the grid since September / October 2013. AECEA is of the opinion that the successful implementation of these three demonstration projects will not only help Solaria, but as well create opportunities for other international CPV players to further tap the domestic Chinese PV market in future.

AECEA – Internal Affairs

Recent Activities **********



AECEA gave an oral presentation on "Opportunities for Foreign Companies in China's Domestic Gigawatt PV Market" in the course of the "PV Business Opportunities" session on Wednesday Oct 2nd, 2013.

The International PV Equipment Association (IPVEA) during the 28th EU PVSEC hold its "PV Production and Battery Forum 2013". AECEA has been invited to gave a presentation on "China – A Domestic Industrial and Deployment Perspective" on October 2nd, 2013.

The first Intersolar South America took place in Sao Paulo / Brazil from September 18-20, 2013. AECEA gave a presentation on "Asian PV Market Development Prospects – Japan/China/Thailand/India" during the "Global & Latin American PV Markets" session on September 18, 2013.

Upcoming Activities**********

PVSEC-23 Photovoltaic Science and Engineering Conference

AECEA has been invited to give two presentations during the upcoming Asia PVSEC-23 in Taipei / Taiwan. The first on Oct 31st during a workshop organized by the International Energy Administration (IEA) and it's Task 1: PVPS on "China – A Domestic Deployment Perspective and Opportunities for Foreign Companies". The second talk on "China's CPV Development & Trends during the 12th Five-Year-Plan (2011-2015) as well on Oct 31st.

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Company Profile

Frank Haugwitz is an independent solar energy consultant based in Beijing since 2002. In his early years in China he was seconded by the German govt. and involved in a bilateral solar / PV energy technical cooperation program. Following this assignment he was responsible for the renewable energy component of the EU-China Energy & Environment Program until the fall of 2009. Since then he has been consulting foreign enterprises and international organizations on the development of renewable energies in general and solar / photovoltaic in particular in China. Since early 2010 he works for the organizer of Intersolar as their Head of Intersolar Conference Development.

From late 2009 until August 2012 he worked as a director in the Deutsche China Consult Co. Ltd. (HK) and in October 2012 he founded his company "Asia Europe Clean Energy (Solar) Advisory Co. Ltd. (AECEA). His services include working with individual clients to apply his extensive China photovoltaic energy-focused insights to their specific needs. Industry experience and in-depth analysis shall assist strategy development and corporate decision making. Focus is on the regulatory framework conditions, policy, as well market and business development. His advisory services provide objective and independent research.