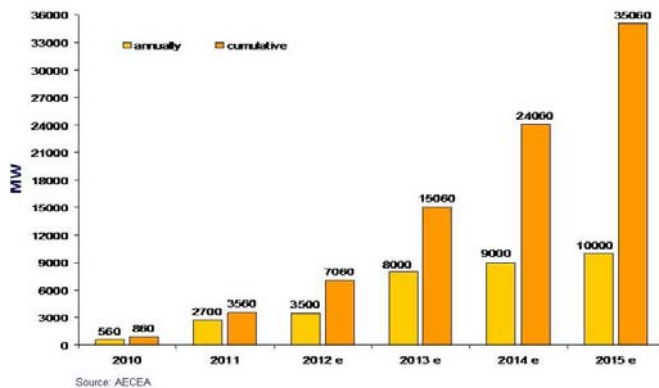


National Target of 10 GW for Solar PV Installations in 2013 announced

On January 8, 2013 the National Energy Administration (NEA) during its annual energy working conference announced that an installation target for solar PV of 10 GW for 2013 has been set. This 10 GW target would correspond to an almost tripling of its annual installations compared with 2012. According to NEA’s annual energy working report, the cumulative installed PV power generation capacity amounted to 7 GW, thus implying an installation of 3.5 GW in 2012.

Market Development until 2015



As of today, the “officially” announced 3.5 GW installed capacity is not the final figure since not all provincial figures have yet been reported back to Beijing, thus there is the possibility that the actual figure might be as high as 4.5-5 GW, which would represent an increase of minimum 30% and up to 85% maximum.

As of today, the 2013 installations may amount to 7-8 GW, due to difficulties in allowing a timely connection to the grid, the presently given uncertainty about the level of FIT for both utility-scale ground-mounted and distributed generation type of applications, and the delayed disbursement

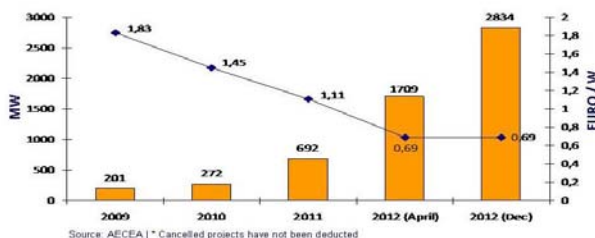
of subsidies by the government creating financial challenges for project developers. As well the recent “Suntech” developments may create certain reluctance among financial institutions to grant further funding.

Golden Sun Programme likely to be discontinued – Govt. favours performance-based incentive schemes

Introduced in June 2009, the Golden Sun Programme was jointly initiated by the Ministry of Housing and Urban-Rural Development (MOHURD), the Ministry of Finance (MOF) and the National Energy Administration (NEA). This support programme was designed to facilitate the implementation of solar PV demonstration projects, regardless of type of application and both on and off-grid installations.

Natl. Golden Sun Program 2009-2012

- focus on all types of on & off-grid applications (MOHURD/MOF/NEA)
- support scheme: capital subsidies to facilitate hardware procurement
- till today 4 phases: facilitates approx. 5708 MW *
- level of subsidies reduced by 60% within 4 years



The main reason why the Golden Sun Programme is likely to be discontinued that the government in general will re-design its incentive schemes from capacity-based to performance-based support programmes in the near future. In addition, the capital subsidy paid by the government were just sufficient to cover up to 50-60% of the investment required, however cost incurred during operation and maintenance created a financial challenge. Furthermore, the capacity-based support did not create sufficient incentives to deploy high-quality components during installations.

As of today, the final decision whether the Golden Sun Programme will indeed be discontinued or might be re-designed, in order to appropriately reflect the on the ground dynamics is still pending. For the time being the deadline for projects approved in December 2012 is June 30, 2013.

National Feed-in-Tariff (FIT) Support Scheme under Revision

According to information released by the National Energy Administration (NEA) the present Feed-in-tariff (FIT) for solar PV installations is currently under review. Back in July 2011 the NEA introduced a single-universal FIT for the entire country, thus creating an incentive for project developers to largely ignore the eastern part of

China and to almost entirely focus on provinces like Qinghai, Gansu, Ningxia, Xinjiang, and Inner Mongolia located in China’s western regions, due to the prevailing higher level of solar radiation. However, China’s western regions are in general characterized by less industrial development, low population density, and consequently low energy demand, thus installations realized in these areas were facing issues related to grid connection, transmission, and distribution. The 2011 FIT support scheme largely favoured large-scale ground-mounted systems.

The first draft of “New FIT Regulations” for solar PV installations is featuring a differentiated FIT for in total four regions across the country. The proposed new level of FIT is calling for a reduction of the present FIT of 1 RMB/kWh (approx. € 12 cents // US\$ 16 cents) of up to 25% depending on the region. The “new” level of FIT is being determined by the level of solar radiation and shall ensure that an IRR of 8% will be achieved in any of these four regions. Overall, a differentiated FIT shall ensure a more even market development throughout China. Perhaps most importantly, the draft of the “New FIT Regulations” has confirmed that the FIT shall be granted for a period of up to 20 years. Previously related official documents released by central govt. entities did not clearly stipulate for how long project developers were entitled to obtain the FIT.

Along with the revision of the current FIT support regime the central govt. announced that relevant govt. entities are in the process to elaborate a FIT based support scheme particularly designed for distributed generation of solar PV power. Accordingly, in addition to the local retail electricity tariff a FIT of RMB 0.35 / kWh (€ EUR 4 cents // US\$ 5 cents) shall be added. Given the different levels of retail electricity tariff throughout China a number of provinces will be certainly more attractive from an IRR perspective than others.

As of today, it is anticipated that in the coming 2-3 months a second draft version of the “New FIT Regulations” will be released before becoming eventually effective.

China’s 12th Five-Year-Plan for Energy Development 2011-2015 released

On January 1, 2013 the National Energy Administration (NEA) announced with almost two years delay the comprehensive “China’s 12th Five-Year-Plan for Energy Development 2011-2015”. The “Plan” stresses the necessity to access stable and sustainable energy resources while moving towards a greener future. The latter is the main reason why the development of non-fossil energy has been prioritized. The “Plan” incorporates subsectors plans (e.g. renewable electricity, biomass, natural gas, coal, etc.) and is a blueprint containing both mandatory and indicative targets. China is expected to invest up to US\$ 2.17 trillion during the 5-year period until 2015. Below are excerpts of the “Plan” with a relevance to both renewable energy and solar.

Category	Indicator	Unit	2010 Value	2015 Target	Annual Change	Type
Quantity of Energy Consumed and Efficiency	Share of Non-Fossil Fuels	Percent of total	8.6%	11.4%	4.3%	Indicative
Energy Production and Supply	Non-Fossil Energy Production Capacity	Mtce	280	470	10.9%	Indicative
Electricity Development	Solar	GW	0.86	21	89.5%	Indicative
Improvement in People’s Livelihood	Green Energy Demonstration Counties	Number	108	200	13.1%	Indicative

By 2015 the total installed electricity generation capacity shall amount to 1490 GW and the majority of capacity additions shall come from renewables, nuclear, and gas. Solar PV power generation capacity is expected to have the highest percentage of annual increase of 89.5%. Over the last two years since March 2011 the solar target has been steadily increased from 5 GW to 10, 15, 21, and now 35 GW. The target of 35 GW has been announced after the plan was published, which contains indicative targets only.



According to the “Plan” in total 21 GW of solar power capacity (20 GW/PV + 1 GW/CSP) shall be installed by end of 2015. Due to recent efforts to actively promote distributed generation of solar PV power, according to the “Plan” by 2015 up to 50% (10 GW) of the PV target shall be comprised of distributed generation projects mainly implemented across 100 so-called new energy demonstration cities. In this context, distributed generation projects are considered to be largely large-scale commercial and industrial roof-top installations, whereas smaller-scale private residential systems are expected to remain rather negligible in the near future. Further demand for solar PV power plants is expected to come from 1000 so-called solar energy villages.

National People’s Congress – Reshuffling of Energy-Related Institutions

During the March 2013 “National People’s Congress” announcements were made that the decade old “State Electricity Regulatory Commission” (SERC) will merge / be absorbed by the National Energy Administration (NEA). SERC’s main responsibilities were to monitor electricity markets since the central government attempts to move away from state-stipulated to more market-oriented electricity prices. Since power market reform rather came to a still-stand a few years after SERC’s inauguration, SERC has rather been seen as a powerless and largely research institution.

The abolishment of SERC and its responsibilities and tasks assumed by NEA is considered as an attempt to further streamline policy making entities. The main responsibilities of the consolidated NEA will include drafting and implementing energy development strategies, plans and policies, advising on energy system reform and regulating the sector. The NEA will remain under the supervision/oversight of the National Development and Reform Commission (NDRC), China’s most important industry regulator. NDRC’s price department holds the energy-pricing authority.

Five years ago a proposal was launched to create a new cabinet-level “Ministry of Energy” in order to oversee and better coordinate energy-related activities spread across 10 ministerial and sub-ministerial entities, and state-owned enterprise in the oil, coal, and electricity industries. However, to date the creation of such an energy ministry remains unlikely, due to vested interest among the various stakeholders.

AECEA – Internal Affairs



On March 5, 2013 members of the Renewable Energy (RE) Working Group of the European Union Chamber of Commerce in China (EUCCC) located in Beijing elected Frank Haugwitz to serve as the Vice-Chairman of the Renewable Energy Working Group. The RE Working Group is a sub-working group of the Energy Working Group. The RE Working Group is primarily composed of renewable energy equipment manufacturers and developers in the biogas, solar, and wind sector.

<http://www.euccc.com.cn/en/working-groups-forums-desks/1/17>

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.

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