



## Asia Pacific Projects Update

# SOLAR PV PROJECTS IN CHINA

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### BACKGROUND

China has one of the largest markets of renewables in the world and has rich solar resources across its territory. Although China has been initially slow in developing its own solar market, the start of 2010 saw the solar energy market start to gather momentum.

In January this year, China raised its solar target for the fourth time in two years to 35GW of solar by 2015<sup>1</sup>. At around the same time, China also announced a 10GW installation goal for 2013<sup>2</sup>.

<sup>1</sup> National Energy Administration's (NEA) China, Announcement, available on [www.nea.gov.cn](http://www.nea.gov.cn)

<sup>2</sup> National Energy Administration's (NEA) China, Announcement, available on [www.nea.gov.cn](http://www.nea.gov.cn)

Government subsidies for solar PV projects in China are granted through special programs, such as the PV Building Demonstration Program, the Golden Sun Program and the Feed-in-Tariff. China is currently changing the present solar Feed-in-Tariff in order to further improve the domestic solar market.

Following the issue of the State Council's policy on improving the Chinese solar PV industry in July 2013, various central government departments have intensively promulgated detailed policies in relation to the solar Feed-in-Tariff, tax incentives, development of distributed generation and simplifying the project approval procedures. One particular aspect of the recently promulgated policies which has attracted interest is the fact that the Feed-in-Tariff in the final policy is even higher than what was contemplated in the earlier disclosure draft. China's strong government support of its domestic solar downstream market has exceeded the market's expectation and resulted in a lot of attention from both domestic and foreign investors.

This publication will cover the basics of how solar PV deals are put together in practice in China.

### REGULATORY FRAMEWORK

The main legislative provisions concerning the Chinese renewable industry are:

- **Electricity Act, 1996 (电力法):** the *Electricity Act 1996* sets out the basic regulatory principles and framework for the electricity industry.
- **Administrative Regulations on the Power Business Permit, 2005 (电力业务许可证管理规定):** this regulation establishes a market-entry system for electricity companies, under which the generation,

transmission, distribution and supply of electricity will require separate certificates and approvals.

- **Interim Regulation on the On-grid Tariff, 2005 (上网电价管理暂行办法):** this regulation sets the government-approved nation-wide standard on-grid tariff and provides for the gradual introduction of a competition-based market price.
- **Renewable Energy Law, 2006 (中华人民共和国可再生能源法):** the *Renewable Energy Law* provides the framework for securing the development of renewable energy in China. Under the *Renewable Energy Law*, grid companies must purchase electricity generated by renewable energy plants and are liable for any unpurchased renewable power.
- **Regulations on the Administration of Renewable Power Energy, 2006 (可再生能源发电有关管理规定):** this regulation sets out the applicable government approval processes and pricing mechanisms for renewable projects.
- **Interim Measures on the Pricing of Renewable Power Energy and the Sharing of Relevant Cost, 2006 (可再生能源发电价格和费用分摊管理试行办法):** the Interim Measures sets out more detailed rules on the pricing of renewable power and the relevant government subsidies.

**And particularly, the recently promulgated policies encouraging the development of downstream solar market which have been released during the second half of 2013, include:**

- **Notice of the National Development and Reform Commission on Perfection of Policy Regarding Feed-in Tariff of Power Generated by Solar PV, 2011 (国家发改委关于完善太阳能光伏发电上网电价政策的通知):** the Notice sets out the currently applicable Feed-in-Tariff for solar projects. The current Feed-in-Tariff is expected to be revised later this year (see section on the Feed-in-Tariff below).
- **Relevant Opinion of the State Council in Improving the Healthy Development of Solar PV Industry, 15 July 2013 (国务院关于促进光伏产业健康发展的若干意见):** the opinion is the most recent high-level policy dealing with improving the solar PV industry in China. It identifies problems with the current Feed-in-Tariff and provides for the revision of the current Feed-in-Tariff to better develop the Chinese solar industry. More detailed rules are expected to be promulgated in accordance with this opinion later on in this year.

- **The Notice of the Ministry of Finance regarding the Subsidies to the Distributed Solar PV Power Generation according to the Quantity of Power, 24 July 2013 (财政部关于分布式光伏发电实行按照电量补贴政策等有关问题的通知)**
- **The Notice of the National Energy Administration on Carrying out the Establishment of Demonstration Area of Distributed Solar PV Power Generation, 20 August 2013 (国家能源局关于开展分布式光伏发电应用示范区建设的通知)**
- **The Notice of the National Energy Administration and China Development Bank on Supporting the Financial Services to the Distributed Solar PV Power Generation 22 August 2013 (国家能源局、国家开发银行支持分布式光伏发电金融服务的意见)**
- **The National Energy Administration's Temporary Administration Rules of Solar PV Power Generation Plants, 29 August 2013 (国家能源局光伏电站项目管理暂行办法)**
- **The Notice of the National Development and Reform Commission on Improving the Development of Solar PV Industry by Utilizing the Price Leverage Effect, 30 August 2013 (国家发改委关于发挥价格杠杆作用促进光伏产业健康发展的通知)**
- **The Notice of the National Energy Administration on Application of Large-scale Usage Demonstration Area of Distributed Solar PV Power Generation 28 September 2013 (国家能源局关于申报分布式光伏发电规模化应用示范区的通知)**
- **The Notice of the Ministry of Finance on the VAT Policies on Solar PV Power Generation, 29 September 2013 (财政部关于光伏发电增值税政策的通知)**

## REGULATORY AUTHORITIES AND APPROVALS PROCESS

### Regulatory Authorities

All solar PV projects (whether domestic or foreign) will require approval from the National Development and Reform Commission and/or its competent local counterparts (the "NDRC").

The NRDC is China's national authority for accepting and approving all fixed-asset investment projects including renewable projects and the National Energy Administration (the "NEA") is the department within the NDRC primarily in charge of energy related projects.

Before applying for final NRDC approval, the relevant approvals will need to be obtained from the following bodies (note this is not an exhaustive list):

- **Ministry of Land and Resources (MOLAR)** - MOLAR are responsible for approving the land-use rights for all projects
- **Ministry of Environmental Protection (MEP)** - MEP are responsible for approving the project's environmental impact assessment reports
- **Ministry of Water Resources (MWR)** - MWR is responsible for approving the project's soil and water conservation plan
- **State Administration of Culture Heritage (SACH)** - SACH is responsible for reviewing the project's impact on cultural heritage
- **Ministry of Finance (MOF)** - MOF is the government authority which assesses and approves any government subsidies for a renewable project
- **the grid companies** - the grid companies are not government authorities but they determine whether the intended power project can connect to the grid.

Depending on the nature of your specific project, additional departments such as the Ministry of Housing and Urban-Rural Development (MOHURD) and the Ministry of Health (MOH) etc, might be involved.

For foreign-invested projects, approval from the Ministry of Commerce (MOFCOM) will also need to be obtained after your project has received final NRDC approval (see section on foreign investment approval below).

### Project Approvals Process

The project approvals process is typically as set out below:

#### 1. NRDC Preliminary Opinion/Approval

The approval process starts with obtaining the NRDC's preliminary opinion on the proposed solar PV project.

#### 2. Relevant Regulatory Authority Approval

After obtaining NRDC's preliminary opinion, the necessary approvals are then obtained from the other relevant bodies, eg MOF and MOLAR (as set out above).

#### 3. Final NRDC Approval

After obtaining all the necessary approvals from the various bodies, NRDC then gives their final and formal project approval.

The NRDC formal approval documentation, will set out all the important details of the approved solar PV project. It will include details of:

- the approved location of the project;
- term of operation of the project;
- capacity;
- on-grid price; and
- any government subsidy.

#### 4. Additional MOFCOM Approval (only for foreign-invested projects)

For foreign-invested solar projects, MOFCOM's approval is also required to establish the project company.<sup>3</sup> MOFCOM approval is generally obtained after NRDC's final project approval.

In approving a foreign-invested solar project, MOFCOM will consider whether:

- their industrial policies are carried out;
- there are benefits for economic development; and
- the measures for protecting the environment and state interests are implemented.

## THE FEED-IN-TARIFF

### The 2011 Feed-in-Tariff (Solar)

In July 2011, the Chinese government decided to set a unified national benchmark price for solar PV projects by releasing the *Notice of the National Development and Reform Commission on Perfection of Policy Regarding Feed-in Tariff of Power Generated by Solar PV* (国家发改委关于完善太阳能光伏发电上网电价政策的通知) (the "2011 Feed-in-Tariff (Solar)").

The 2011 Feed-in-Tariff (Solar) divided all non-bidding Chinese solar projects into two categories:

#### 1. Projects approved prior to July 1, 2011 and which have achieved commercial operation prior to December 31, 2011.

These projects are entitled to a tariff of **1.15 RMB per kWh**.

#### 2. Projects approved after July 1, 2011 (or approved prior to that date but have not begun commercial operation by December 31, 2011).

These projects are entitled to a tariff of **1 RMB per kWh**.

However, exceptions have been given to projects located in Tibet, which, under certain circumstances can still receive a Feed-in-Tariff of RMB 1.15.

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<sup>3</sup> NRDC and MOFCOM, *Catalogue of Industries for Guiding Foreign* 2012.



## Revision of the 2011 Feed-in-Tariff (Solar) - the New Feed-in-Tariff Policy

### *The New Feed-in-Tariff Policy is aimed at addressing existing problems with the current Feed-in-Tariff*

The main problem with the 2011 Feed-in-Tariff (Solar) was that, since it did not differentiate between the different regions in China, it created an incentive for project developers to largely ignore the eastern part of China and entirely focus on provinces in the western region (like Qinghai, Gansu, Ningxia, Xinjiang and Inner Mongolia) due to the higher level of solar radiation in the west. However, since the western regions are generally less developed with lower population densities and consequently low energy demands, the installations in those areas were faced with issues related to grid connection, transmission and distribution.

### *The new Feed-in-Tariffs*

After obtaining the public comments, the NDRC released the *Notice on Improving the Development of Solar PV Industry by Utilizing the Price Leverage Effect* (国家发改委关于发挥价格杠杆作用促进光伏产业健康发展的通知) (the "New Feed-in-Tariff Policy") for solar PV projects which has split the country into three different regions, and provided a differentiated Feed-in-Tariff for each region. The new Feed-in-Tariffs exceeds what was originally proposed in the disclosure draft<sup>4</sup> and is higher than the market expectation. The applicable Feed-in Tariffs are:

- **0.90 RMB per kWh for Type-I areas**, including Ningxia; Haixi of Qinghai Province; Jiayuguan, Wuwei, Zhangye, Jiuquan, Dunhuang, Jinchang of Gansu Province; Hami, Tacheng, Aertai, Kelamayi of Xinjiang Province; Inner Mongolia (other than Chifeng, Tongliao, Xinganmeng, Hulunbeier);
- **0.95 RMB per kWh for Type-II areas**, including Beijing; Tianjin; Heilongjiang; Jilin; Liaoning;

<sup>4</sup> The NDRC published the disclosure draft of the *Notice on the Perfection of the Feed-in Tariff of Power Generated by Solar PV* (关于完善光伏发电价格政策通知) in March 2013. The disclosure draft proposed different Feed-in-Tariffs for four different regions: (i) 0.75 RMB per kWh for Type-I areas, including Haixi, Haibei, Guolu, Yushu of Qinghai province; (ii) 0.85 RMB per kWh for Type-II areas, including Xinjiang, Ningxia, Inner Mongolia, Xining, and several counties in Qinghai, Sichuan and Yunan; (iii) 0.95 RMB per kWh for Type-III areas, including Beijing, Tianjin, Heilongjiang, Jilin, Liaoning, and several counties in Heibei, Shanxi and other areas in Yunan and Gansu; and (iv) 1 RMB per kWh for areas other than the above.

Sichuan; Yunnan; Chifeng, Tongliao, Xinganmeng, Hulunbeier in Inner Mongolia; Chengde, Zhangjiakou, Tangshan, Qinhuangdao of Hebei Province; Datong, Suzhou, Yizhou of Shanxi Province; Yulin, Yanan of Shannxi Province; places other than the Type-I areas in Qinghai, Gansu and Xinjiang;

- **1.00 RMB per kWh for Type-III for areas other than the above**<sup>5</sup>

The new level of Feed-in-Tariff will be more proportionate because it is determined by the level of solar radiation in each region.

The New Feed-in-Tariff Proposals are aimed at ensuring an IRR of more than 8% across all four regions.

### *Additional Feed-in-Tariff for Distributed Solar PV Power generation projects*

There is also an additional Feed-in-Tariff specifically aimed at improving the market for distributed Solar PV projects.

For distributed solar PV projects, the New Feed-in-Tariff Policy has proposed an additional 0.42 RMB/kWh Feed-in-Tariff on top of the local electricity tariff to be paid by the grid companies to the project companies. This additional Feed-in-Tariff will generally be for a 20 year period.

However, the amount and period of the additional Feed-in-Tariff will depend on your project and the specific region.

Given the different levels of retail electricity tariffs throughout China, a number of provinces will certainly be more attractive from an IRR perspective than others.

DLA Piper can assist you with obtaining additional local subsidies for your solar PV project.

## OBTAINING THE FEED-IN-TARIFF FOR YOUR SOLAR PROJECT

The current 2011 Feed-in-Tariff (Solar) and the New Feed-in-Tariff Policy do not provide for any additional or specific approval procedures for obtaining the Feed-in-Tariffs for your solar project.

According to the media report, the NEA is now in the final stages of preparing the detailed application of the rules, in regards to how to calculate the power generated, how to settle the power price and how to implement the government subsidies and tax incentives. It is expected that these rules will provide practical guidance on the implementation of all the previously promulgated policies on encouraging solar power generation.

<sup>5</sup> The applicable Feed-in-Tariff in Tibet will be decided separately in another policy.

In practice, the approval process to obtain the Feed-in-Tariff will be the same as the normal approvals procedure for any solar project as set out above.

The final NRDC approval will specify the applicable Feed-in-Tariff in the formal approval documentation for your project.

## **APPROVALS CHECKLIST FOR SOLAR PROJECTS**

**In order to construct a solar PV project the following will need to be obtained (note this is not an exhaustive list):**

- 1. NRDC initial approval/preliminary opinion**
- 2. land use permits**
- 3. planning permits**
- 4. construction permits**
- 5. environmental impact assessments**
- 6. fire safety assessments**
- 7. approval of the project's soil and water conservation plan**
- 8. cultural heritage assessments**
- 9. MOF assessment for government subsidies**
- 10. grid company approval to connect to the grid**
- 11. final NRDC approval (which will set out all the important aspects of the solar project and the applicable Feed-in-Tariff)**
- 12. foreign investment verification and approval.**

## **CONCLUSION**

Chinese renewables projects involve a unique set of risks. Developers and lenders need to understand these risks, and address and adapt their project structures and project documents accordingly. The challenges cannot be underestimated. However, developers who can properly manage these risks stand to take a share of what is proposed to be the largest solar market in the world.

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