Pursuing Renewable Energy Business with China





September 2006

BCSE
Australian Business Council for Sustainable Energy

CREIA
Chinese Renewable Energy Industries Association

Disclaimer

The views expressed in this report are those of the authors and the information is believed to be accurate at the time of writing. The Australian Business Council for Sustainable Energy (BCSE) does not in any way guarantee the accuracy of any information or data contained in this paper and accepts no responsibility for any loss, injury or inconvenience sustained by any users of this publication or in relation to any information or data contained in this publication.

The views expressed herein are not necessarily the views of the Commonwealth, and the Commonwealth does not accept responsibility for any information or advice contained herein.

Acknowledgements

The funding for this project was provided by the Australian Government, through the Department of the Environment and Heritage, Australian Greenhouse Office, and the Australian renewable energy industry through the Australian Business Council for Sustainable Energy.

Australian Government

ISBN 0-9802806-0-5

September 2006

Contents

Purpose of the Guide

Many Australian renewable energy businesses are intrigued by China and the trade opportunities that the Australia-China relationship presents. At the same time differences in language, business culture, legal systems, not to mention the sheer size and internal variations within China can be somewhat daunting.

None of these problems – real or perceived – are insurmountable in themselves. However, in combination they can present quite a barrier with the result that many Australian firms do not pursue potentially worthwhile business relationships and market opportunities in China.

The Guide to Pursuing Renewable Energy Business in China is intended as a practical tool for Australian firms seeking to develop renewable energy business opportunities in China and with Chinese partners. In part it is intended to 'debunk' some common misinterpretations about differences in our countries' business practices. It will also explain where and why differences do exist so that Australian and Chinese firms can be better equipped to build strong, lasting mutually beneficial business relationships. It also disaggregates China, to identify variations and potential business opportunities at the provincial level, which might prove more manageable to Australian renewable energy firms, particularly those considering China for the first time.

Perhaps more so than any other market, familiarisation is critical to pursuing business opportunities in China. This should encompass at least a basic investigation of the culture, including regional variations as appropriate, an overview of the policy framework, policy drivers and responsible agencies and importantly some knowledge of differences in the legal framework. This Guide addresses most of these areas (though there is far more to the culture than we can reasonably cover here), as well as providing an overview of potential renewable energy project identification routes. What the guide can not do is substitute for 'field' work. Chinese business **is** heavily relationship-driven and no amount of reading can help you establish and nurture relationships with potential partners, suppliers, clients or enablers without several visits to the country. That said, we aim also to identify possible facilitators – organisations that have practical experience in the Chinese renewable energy business sector – that can assist with arranging meetings, providing translation services and providing inside knowledge of specific aspects of the world's biggest market to help you build such links.

Structure of this Guide

The Guide provides a comprehensive high level overview of key issues and is particularly focused towards those companies that are in the exploratory stages of China renewable energy business development. It consists of four main sections which provide briefings on key aspects of doing better business in China:

1. the political, cultural and general business environment;
2. the legal and investment framework; and
3. the renewable energy environment;
4. business facilitation channels.

Interspersed throughout the Guide are a number of boxes highlighting key facts and useful snippets of information. The Guide also incorporates a number of case studies from Australian and Chinese businesses that provide valuable insights to the practicalities of doing renewable energy business in China. We are extremely grateful to all the companies that contributed case studies for this Guide for sharing their knowledge and experiences.

Further information sources

For firms seeking a deeper understanding, the Guide is complemented by a number of more detailed reports that are available via the International section of the BCSE website www.bcse.org.au/international/china. These provide additional information about the legal framework, investment vehicles, foreign currency issues, taxation, intellectual property protection, and dispute resolution, as well as further insights to the market status and potential for renewable energy in China. Coupled to existing services available from the Australian Commonwealth and State Governments, and the newly established Australia-China Renewable Energy Business Assistance Service offered by the BCSE and CREIA, we anticipate that the Guide will support many more successful Australia-China renewable energy partnerships.

The Guide has been developed by the Australian Business Council for Sustainable Energy (BCSE) in association with the Chinese Renewable Energy Industries Association (CREIA), with financial support from the Australian Greenhouse Office within the Department of the Environment and Heritage and with assistance from the National Development and Reform Commission, China. Key legal advice and information on a variety of investment considerations was provided by Mallesons Stephen Jaques (Hong Kong). Coordination and editing was by IT Power (Australia).

About the Australian Business Council for Sustainable Energy

The BCSE is a member-based industry association representing the sustainable energy industry in Australia. It covers renewables, waste-to-energy, gas-fired generation and energy efficiency. The BCSE has over 290 member organisations, including installers and designers of renewable energy systems; large project developers and project service providers (such as consulting engineers, economists, financial and legal advisors); equipment and component manufacturers and suppliers; researchers and academics; energy retailers, and energy service providers. In addition to policy development and advocacy activities, the BCSE runs events for members during the year and undertakes projects to develop the renewable energy industry in particular. The BCSE has also administered the national solar photovoltaic (PV) design and installation Accreditation program since 2002.

About the Chinese Renewable Energy Industries Association

CREIA was initiated as an independent industrial association in 2000 under the SETC/UNDP/GEF Project 'Capacity Building for Rapid Commercialization of Renewable Energy in China'.

Since its establishment and formal registration in 2002, CREIA has been bringing together national and international project developers and investors, supporting dialogue between national regulatory authorities and the industry, and serving as a network for enterprises. In doing so it draws together expert professionals and entrepreneurs from the new and renewable energy sector for the purposes of research & development, production and sales in order to accelerate the development of Renewable Energy in China.

As an industrial association, CREIA has succeeded in attracting over 100 corporate members and about 160 individual members covering all the sub-sectors of Renewable Energy in China; Solar Thermal, Solar PV, Wind, Biomass (Biogas Plant), Bagasse, Hybrids, Geothermal, Small Hydro and Ocean energy.

CREIA provides a broad range of qualified services including:

- Policy analysis and recommendations for related governmental departments
- Market development and market regulation
- International cooperation between the industry and foreign investors
- Training, education and outreach to raise both the professional level and public awareness
- Technology development and industrialisation
- Environmental support to mitigate the pressure caused by climate change

www.creia.net

Part A
Welcome to China

1 Introduction

For observers the world over, China is increasingly being regarded as the new land of opportunity. The nation is home to 1.3 billion people, more than one-fifth of the world's population, all anxious to share in the benefits of new economic and social development that have been stimulated by the government's reform policies since the early 1980s, including the re-opening of the country to international trade.

The Chinese economy has experienced an annual average rate of growth approaching 10% since 1980 and shows little sign of cooling in the foreseeable future. That economy is now worth around USD 2200 billion[1] (approximately AUD 3 trillion), with total imports amounting to around USD 630 billion, and export value estimated at some USD 820 billion.

The Australia-China relationship holds real and significant bilateral trade opportunities for both countries. Indeed for Australia, China is now our second largest trading partner, both in terms of exports and imports: exports of merchandise and services totalled over AUD 18.3 billion in 2005, with imports exceeding AUD 22.5 billion. Significantly, exports of goods from Australia to China grew by over 45% in 2005 from the previous year, and Australia now ranks ninth in terms of China's import relationships, accounting for 2.5% of all goods imported to the Chinese mainland in 2005.

At the same time, many people both within and outside China are still coming to terms with the ongoing changes in the policy environment, and with how best to mesh generally accepted international business practices with China's legal, financial, socio-economic and cultural framework. The economic boom also presents China with some serious challenges, notably how to ensure that those benefits of economic development are accessible to Chinese throughout the country and how to sustain growth with due care for the local and global environment.

While the response to date has been dominated by conventional energy and power supply (see box – 'A Power To Be Reckoned With'), the sustainable development challenge offers a major opportunity for China's emerging renewable energy (and energy efficiency) sector and more broadly for international renewable energy businesses. With USD 20 billion set to be spent over the next 15 years on energy generation, there is a target for 10% of this to come from 'environmentally-friendly' services by 2010.

A Power To Be Reckoned With

One of the key drivers, or at least one of the inherent components of China's economic surge, has been a massive increase in energy demand and consumption. Between 1980 and 2000, energy demand increased by around 4.6% per year – about half the rate of economic growth over the same period. However, rapid urbanisation, expansion of energy intensive industries and general improvement in living standards, amongst other factors, have severely stretched energy supply across the economy in recent years, notably in the electricity sector. Power blackouts were experienced in all but four of China's provinces in 2003/2004 due to lack of generation capacity and stretched coal supplies. This situation is now being addressed with massive investment in (largely thermal) generation and transmission infrastructure and international primary energy contracts. But it seems that the thirst for power is insatiable, such that at 14 to 15%, growth in energy consumption for the past two years has outstripped GDP growth. In the five years to the end of 2007 China is expected to have doubled its generation capacity to around 700 GW[2].

1. Using the Purchasing Power Parity GDP model, China's GDP (PPP) in 2005 was estimated at almost USD 9.4 trillion. Source DFAT Factsheet

2. KPMG, *Energy Outlook for China 2006*

2 Key geographical areas for renewable energy

Although Australia is a geographically large country, we are nonetheless a fairly compact nation in terms of major population centres and market accessibility. For those within the renewable energy sector in Australia, it frequently feels as though we know practically everyone else in our local industry. Perhaps the most daunting aspect for Australian businesses venturing into China is the apparent scale of just about everything: over 5000 km from west to east and from north to south is not so unusual for Australians, but a population of 1.3 billion; cities that have practically the same population as our entire country; more new electricity generation capacity coming online annually than is installed throughout all of Australia, thousands upon thousands of manufacturers and seemingly similar numbers of officials.

But that focus on 'scale' can be misplaced and self-defeating. Few Australian firms whether or not they are in the renewable energy field would set out to 'conquer Europe' in one hit. Initially we might attempt to gain an insight into the market, project opportunities, distribution channels, key players and so on within Germany or Spain or the United Kingdom (or even within a part of one of those countries), concentrate on developing a few specific opportunities and build from there. The approach to developing business in China should really be similar.

The People's Republic of China (PRC) is administratively organised into 34 provincial level divisions: that includes 23 provinces, 5 autonomous regions (regions recognised for designated ethnicity), 2 special administrative regions (Hong Kong and Macao – regions with a high degree of autonomy, e.g. in terms of their legal systems, currency and customs) and 4 municipalities. The municipalities – Beijing, Chongqing, Shanghai and Tianjin – are administered directly by the central government and have the same political, economic and jurisdictional rights as a province.

Underneath the provincial level divisions are over 330 prefecture level divisions, which include also many major cities and their surroundings. Prefectures are themselves sub-divided into almost 2900 county level areas (which are progressively divided into township and village level divisions).

CHINA'S PROVINCES, AUTONOMOUS REGIONS AND MUNICIPALITIES

Population, Urbanisation and Regional Economic Variations

By the end of 2003, the official population of China was 1.292 billion people, 40.5% of which were considered 'urban' the remainder 'rural'. This highlights a marked urbanisation trend even from three years earlier, at which time 36.2% of the 1.267 billion population were urban. The urban population accounted for just 26.4% in 1990.

The following Table gives some indication of the population distribution of China by region. Note that the population data does not include the two special administrative regions (Hong Kong and Macao), nor Taiwan province. Chongqing, located approximately in the middle of the country, is by far China's largest city, with approximately half of its total population (15 million people) living in the city centre. However, in terms of economic development it is far less advanced than the east-coast powerhouses such as Shanghai, Beijing, Tianjin, Zhejiang, Guangdong, Jiangsu, Fujian and Shandong.

For further social and economic indicators, the website of the National Bureau of Statistics of China is an invaluable resource: www.stats.gov.cn/english

TABLE 1:
PROVINCIAL LEVEL POPULATION AND ECONOMIC OUTPUT

Region	Population† (millions)	GDP† 2004 Billion CNY
Beijing	14.93	428.33
Tianjin	10.24	293.19
Hebei	68.09	883.7
Shanxi	33.35	304.24
Inner Mongolia	23.84	271.21
Liaoning	42.17	687.27
Jilin	27.09	295.82
Heilongjiang	38.17	551
Shanghai	17.42	745.03
Jiangsu	74.33	1550
Zhejiang	47.2	1124.30
Anhui	64.61	481.27
Fujian	35.11	605.31
Jiangxi	42.84	349.59
Shandong	91.8	1549.07
Henan	97.17	881.51
Hubei	60.16	632.05
Hunan	66.98	561.23
Guangdong	83.04	1603.95
Guangxi	48.89	332.01
Hainan	8.18	79.01
Chongqing	31.22	266.54
Sichuan	87.25	655.60
Guizhou	39.04	159.19
Yunnan	44.15	295.95
Xizang (Tibet)	2.74	21.15
Shaanxi	37.05	288.35
Gansu	26.19	155.89
Qinghai	5.39	46.57
Ningxia	5.88	46.04
Xinjiang	19.63	220.02
National	1294.15	

Sources: †China Statistical Yearbook 2005; ǂwww.china.org.cn 'Province View'

2.1 Provincial Focus

A number of provinces appearing to offer good near-term opportunities for the Australian renewable energy industry are summarised in Table 2. These have been identified in consultation with CREIA on the basis of renewable energy technology and services requirements for which Australian firms have a particular demonstrated proficiency, and also from previous renewable energy trade-linkages that have been established with BCSE and Australian governments. Note that these are not necessarily the best performing provinces in terms of current economic output, as much of Australia's opportunity may lie in assisting the less developed central and western regions to realise development potential through access to improved energy services.

More detailed overviews on each of the highlighted provincial level divisions are provided on the International section of the BCSE website.

TABLE 2:
PROVINCES WITH STRONG DEVELOPMENT POTENTIAL FOR AUSTRALIAN RENEWABLE ENERGY PRODUCTS AND SERVICES

Province	Relative Economic Development Status	Major Renewable Energy Opportunities	Comments
Gansu	Underdeveloped	Solar PV (SHS and Village power), Wind (large and small-scale)	Rural Electrification under Brightness Program
Guangdong	Highly Developed	Solar PV (Rooftops), SWH (integrated), Wind (large-scale)	Special Economic Zones (Shenzhen, Zhuhai, Shantou)
Hebei	Well Developed	SWH (integrated), Wind (large-scale)	
Inner Mongolia	Underdeveloped	Solar PV (SHS, Village power, future Very Large-Scale plants), Wind (large and small-scale)	Rural Electrification under Brightness Program
Jiangsu	Highly Developed	Solar PV (Rooftops), SWH (integrated), Wind (large-scale)	
Liaoning	Well Developed	Wind (large-scale)	Special Economic Zone (Dalian)
Qinghai	Underdeveloped	Solar PV (SHS and Village power), SWH (low-cost), Wind (small-scale)	Rural Electrification under Brightness Program
Shaanxi	Moderately developed	Solar PV (R&D and manufacture)	Supportive provincial government, gateway to China North-West market
Shandong	Highly Developed	SWH (integrated)	
Sichuan	Moderately developed	Solar PV (SHS and Village power)	Rural Electrification under Brightness Program
Tibet	Underdeveloped	Solar PV (SHS and Village power), Wind (small-scale)	Rural Electrification under Brightness Program
Xinjiang	Underdeveloped	Solar PV (SHS and Village power), SWH (low-cost), Wind (large and small-scale)	Rural Electrification under Brightness Program
Zhejiang	Highly Developed	SWH (integrated)	

Special Economic Zones

The Chinese government has established seven 'Special Economic Zones' (SEZ), which have a number of special characteristics intended to boost foreign investment. This includes for instance special tax incentives and a degree of autonomy in respect of international trade. The SEZs are equivalent to provinces in respect of their economic administration and are treated separately (from the rest of their respective provinces) in national plans.

The SEZs are: Xiamen in Fujian Province; Shenzhen, Zhuhai and Shantou in Guangdong Province; Dalian in Liaoning Province; Pudong in Shanghai Province; and the entire Province of Hainan.

3 Government Agencies and Decision Making

While there are certainly opportunities for renewable energy ventures solely within the private sector (for instance, China-based manufacturing), as with most other countries worldwide, the policy framework in China has a very strong influence on domestic renewable energy research and development (R&D), industry development and deployment. A working knowledge of the key government agencies and their respective responsibilities is therefore useful for foreign businesses seeking to gain an understanding of the Chinese renewable energy environment and direction.

The Chinese Communist Party (CCP) remains the sole political party and is therefore central to all policy decision-making.

The 3000 strong National People's Congress (NPC), whose members are elected by Local People's Congresses at Municipal, Regional and Provincial levels, is the 'highest organ of state power' (effectively the parliament). Each of China's 56 ethnic groups is represented in the NPC, which meets at least once per year for two weeks. At other times, legislative responsibilities are managed by the NPC's Standing Committee.

The Supreme People's Court supervises the judiciary which, for criminal and civil cases, is administered by three levels of Peoples' Courts – higher for provinces and autonomous regions, intermediate for prefectures and municipalities, and basic for county, town and municipal districts.

Principal State Agencies

NATIONAL DEVELOPMENT AND REFORM COMMISSION (NDRC)

The NDRC is a macro-control department of the State Council. One of its major functions is to organise and implement national economic and social development strategies, long- and medium-term and annual plans; propose goals and policies for national economic development and optimisation of important economic structures. It is the most powerful economic decision-making body in the Chinese government system.

The Energy Bureau (EB) established within NDRC undertakes these functions in respect of broad energy development, a dedicated Renewable Energy Division within the EB responsible for the strategies, annual plans, goals and policies or any regulation related to renewable energy.

Local Development and Reform Commissions (LDRC) come under the command of and have similar structures to the National Commission; LDRCs have an Energy Division to take commands from the Energy Bureau or Renewable Energy Division in NDRC.

Also under the domain of NDRC is the Energy Research Institute (ERI), which predominately provides technical support to policy suggestions and consultation support to NDRC. Within ERI is the Centre for Renewable Energy Development (CRED). CRED fulfils similar functions as ERI, but is specifically focused on the area of renewable energy.

MINISTRY OF SCIENCE AND TECHNOLOGY (MOST)

MOST's major functions govern the macro-strategy for China's scientific and technological development as well as formulation of policies, guidelines and regulations for promoting economic and social development with science and technology. Within MOST, the hi-tech development and industrialisation department has principal responsibility for R&D projects. For example, MOST is continuously offering funding for R&D into local wind turbine development and manufacture.

MINISTRY OF FINANCE (MOF) AND OTHERS

MoF is the macro-control and regulation organ in charge of financial expenditures and revenues, financial and taxation policies, and state-owned capital. The principal influences in relation to renewable energy are its taxation functions and its role as the focal point for international donation/funding relationships.

Other departments and bodies under the State Council that have some influence over renewable energy industry and market development include: the Ministry of Construction, notably in relation to urban planning and development; the Ministry of Agriculture, particularly as it relates to economic restructuring of the rural economy and poverty relief and development; and the State Environmental Protection Agency.

The main executive of Chinese government is the State Council, to which the various ministerial departments and state regulatory bodies report. The principal bodies with influence over renewable energy policy are the National Development and Reform Commission (NDRC)[3], particularly in respect of energy planning and targets, and the Ministry of Science and Technology (MOST), notably for Research and Development (see box – 'Principal State Agencies').

Decision-making generally is devolved to Local People's Congresses, whose organisational structures somewhat mirror the National People's Congress; elected Governors and their deputies have control at the provincial level; mayors and their deputies at the city level; heads and their deputies at the county/district/township levels. Local Standing Committees have responsibility for debating and drafting local laws and regulations on a day to day basis. However, there is a tendency towards more centralised government oversight in the areas of renewable energy and climate change. A notable example is in relation to Chinese Clean Development Mechanism projects, which must be approved by the NDRC irrespective of their size and value.

Just as in Australia, cultivating relationships with influential community representatives at all levels of government can be very valuable for broader business development purposes. Similarly, serious penalties exist for attempted bribery or corruption of public officers.

3.Formerly the State Development and Planning Commission (SDPC)

4 Culture and Relationships

Amongst non-Chinese, rumours abound about the mysterious 'honour code' that underpins Chinese personal and professional relationships, which can make it very hard for non-Chinese to access opportunities in China. That code – guanxi – does exist but it is in reality far less mysterious and far less of an obstacle than rumour would have it. It is somewhat similar to the 'old school tie' network that exists in many facets of western culture, but is more about establishing and demonstrating trust and maintaining valued relationships.

Chinese culture places considerable value on relationships, so Australians seeking to develop business links with Chinese organisations should be prepared to invest more time in cultivating a trusting relationship than might be the case with other Australian or 'western' partners. It is in any case prudent to ensure that all parties have a thorough understanding of their roles, responsibilities and rights in the relationship, but it can also be very helpful to get things done. The case study of BP Sunoasis provides some valuable insights in this regard.

How you build that relationship is really beyond the scope of this Guide. You can find endless advice as to how you should dress, what gifts you should or should not give, the significance or otherwise of meals and generally how you should act during contract negotiations. Much of this is interesting, but unlikely to make or break a business deal. Perhaps the key maxim for Chinese relationship building – as with all relationships – is 'do as you would be done by'. Show courtesy, be friendly but not over-familiar, be honest but not brutally frank, be patient.

It is worth being aware of regional particularities; for example, western (including south-west) and northern provinces tend to be more traditional than their eastern and south-eastern counterparts. This is a direct reflection of the relative exposure to foreign trade and foreign business practices. There are also some fairly universal traits that guests can expect to experience. Many Chinese – like many Aussies – see alcohol as an ice-breaker and more than that see drinking as a route to honesty: more drink = more honest. However, if you prefer not to over-indulge, invariably a polite, discreet explanation to your hosts will be sufficient to excuse you without harming the relationship.

As in most other cultures, networking is useful for business development, but also as in most other cultures the driving force behind successful business in China today is the attractiveness of the business proposition. If you are offering a good product, service, or opportunity at a good price, are above board, are diligent and prepared to put in the leg-work, China is not so different from any other market. The case study of Narada Batteries offers an interesting take on this from the Chinese perspective.

CASE STUDY

BP Sunoasis

BP Solar, a subsidiary of the BP Group, and China Xinjiang Sunoasis Co., Ltd have recently established a joint venture company, BP SunOasis, to manufacture, market and sell solar photovoltaic products and systems in China. The initial equity share is 49% BP Solar, 51% SunOasis.

One of the striking lessons from BP Solar's experience is the investment in time to successfully establish the partnership. The 'ground work' to identify and select a partner took 2 years, subsequent to which contract negotiation took a further 1 to 1.5 years.

According to BP Solar, understanding of language and culture are other major factors that can have an impact on the success or otherwise of partnerships with Chinese organisations. BPS advises that a full-time interpreter experienced with translation in your area of industry/expertise is essential in order not to miss critical information. Similarly, it is vital that your team of people involved in the negotiation with partners (at all levels of hierachy) understand and respect the culture.

BP Solar was fortunate in that its Parent company is well established in China with experience of running JV's. This enabled internal networking to ensure that lessons from other JV's within the group were taken onboard. Of these, probably the most important is the difficulty and time involved in recruiting the Management team. Finding & recruiting highly-qualified Chinese Nationals is easy; however, finding the right calibre of experienced people, particularly people used to Western organisation, is much more difficult. BP Solar's advice is not to attempt to cut corners:

- To invest in China, does cost money.
- Make sure you have a full-time team on the ground in China for your partner negotiation; it does not work well flying in and out, even if that is very regular.
- Recruit experienced Chinese nationals if you can. It is worth waiting to find and recruit the RIGHT person.

The KEY to a JV's success is that both partners must have the same expectations. A JV is like a marriage. Keep it open, transparent, interesting, fun... and it will be a success in China.

- Dont buck out of the ceremony – whether meeting with high level officers, eating or drinking with your counterparts, it is important to respect Chinese traditions to gain the respect and trust of your partners. Note though that the Chinese liquor used to ceremonially toast each other is extremely alcoholic!
- Be careful in contract negotiation that everything is really understood. Smiling faces give the impression of full understanding, but the detail of what has been said may not have been taken-in. Always review the major agreements made at end of the day with your partner to ensure full understanding.
- Whether negotiating or running a JV, 'choose your battles'. There will be many small issues about which you don't necessarily see eye to eye with your partner. If these will not have a significant long-term impact on the business it may be better to concede rather than fight on every issue. This allows you to stick firm on the big issues while still keeping the relationship solid.

Austrade's 'Better Business' Tips

It is customary to present business cards at business meetings, and it is helpful if one side of the business card is printed in Chinese. Business cards should be presented and received with both hands.

Lunches and dinners are best described as working meals, they can indicate a general warming of a relationship, but their role should not be over-stated.

Gifts are not a pre-requisite unless proceedings are pre-arranged with formality (by Chinese standards, not yours). However, if you feel that a gift is appropriate, small items with a particular Australian theme are generally most appropriate.

Mandarin is the official language of the People's Republic of China and is spoken by all but a few elderly people. English is not widely spoken and you should not expect persons outside of the major international hotels to have a good grasp of English. For taxi drivers, we suggest you have the address of your destination written in Chinese. Your hotel can help.

Further advice is available from www.austrade.com

CASE STUDY

Narada Batteries

Narada Power Source Co. Ltd (Narada) is a global leader in stored energy solutions for industrial applications, with an extensive line of motive power, reserve power, and speciality batteries. Though not specifically focused on the renewable energy sector, the company provides an interesting insight to some of the issues of international partnerships from a Chinese perspective.

Headquartered in Hangzhou, Zhejiang Province, Narada has been expanding its sales and service locations rapidly throughout the world and is developing partnerships with an extensive network of companies outside of China. Narada's experience is that foreign companies are generally disciplined and reliable with good credit and very sound contractual arrangements. This generally makes business with overseas firms relatively straightforward, as all parties know where they stand and who has responsibility for resolving particular problems.

At the same time, the strong contractual arrangements can occasionally present real problems. Long-term contracts can lock companies into price agreements (i.e. price caps) which may be problematic given pressures for raw materials supply. This is an international phenomenon, but it is particularly pronounced in China due to the current rapid economic development and very strong competition for materials.

Contracts therefore should be structured to provide for some degree of flexibility to accommodate such external pressures for the benefit of all parties. In other words, the relationship needs to be one of mutual benefit, otherwise it is destined for failure. Another example is in the area of exchange rate liability; again a mutually satisfactory arrangement for risk-sharing is likely to reap long-term rewards for ongoing business relationships.

This is really the key issue that foreign firms need to understand. Chinese organisations are in the business of long-term relationship building. To facilitate this, foreign firms need to develop an understanding of the practicalities of operations in China market. This effectively means more exposure via visiting the country. To initiate this, one approach is to gain a 'foot-in-the-door' by partnering with another foreign firm already present in China, or alternatively through appropriate 'brokers'. CREIA and BCSE might have a role in this.

4.1 Local Assistance

There are some fundamental barriers to straightforward trading, notably in relation to language differences and the legal /regulatory framework governing foreign investments. The legal and financial implications of undertaking business in China or via cooperation with Chinese firms are discussed in more detail in Section 6; however in general, both language and investment issues can be mitigated by taking advantage of local specialists with knowledge and experience of China's business environment.

Australian export assistance providers such as Austrade, the Australia-China Business Council, Australian Chambers of Commerce in China and in some instances, Australian State business development assistance offices can provide a valuable linking function to couple Australian businesses with reliable local translators and sound legal advice. The Chinese Renewable Energy Industries Association (CREIA), may also be able to assist with specialist renewable energy related services.

BCSE also has a range of contacts in an increasing number of provinces throughout China that may be able to organise or suggest appropriate intermediation and counsel. Key contact points are provided at the end of this Guide. The case study of Wind Prospect also offers some pointers.

CASE STUDY

Wind Prospect Pty Ltd

Wind Prospect Pty Ltd is a leading renewable energy developer, based in Adelaide, South Australia. Since 2000 it has developed nine wind farm sites in South Australia, and has obtained Planning Consent for 630 MW.

In 2004 Wind Prospect set up a Hong Kong office and undertook consulting work, which included due diligence on the Weihai Wind Farm in Shandong for China Light and Power (CLP), as well as a wind farm feasibility report in the northeast of China. These two projects were helpful in introducing the company to the Chinese market, which led to Wind Prospect establishing a second enterprise in Greater China, IW Power Co. Ltd (IWP), a joint venture with the Insigma Group and Ridge Wind Limited. IWP has offices in Beijing and Hangzhou, with a team of 11 Chinese and one Australian now in place.

Wind Prospect's experiences in the Hong Kong and mainland China markets have been very different from each other. In Hong Kong the greatest issue for renewable energy companies is the availability of space for developments.

On the mainland, uncertainty regarding regulatory support for wind energy has been an ongoing issue. However, the introduction of the Renewable Energy Law and associated regulations is positive. Some minor fine-tuning of the regulatory system will be needed to provide stability and support for sustained renewable energy growth to achieve the ambitious targets, but the State is continually reviewing these needs.

Another challenge for Australian companies doing business in China are cultural and language difference. To address these issues, Wind Prospect has chosen to work with a Chinese partner, to employ local staff and to inject a full-time Australian manager into the team in China, to assist with knowledge transfer and liaisons between Wind Prospect and IWP.

Part B: Legal Framework and Investment Considerations

More extensive information on China's business environment and legal framework is provided in a report, prepared by Mallesons Stephen Jaques for the project. 'China Business Environment Review' – is available for download from the BCSE website, International section.

5 China's Legal Framework

One very striking and important difference between Australia and China is the legal and regulatory framework. While other aspects of business in China may be best cultivated in-country, prudent investors will first seek an understanding of relevant business and contract laws and the implications for remittances, asset protection and dispute resolution well before making any investment decisions. This section provides a general overview of the key legal considerations.

5.1 Nature of the legal system

The legal system in China, with the exception of Hong Kong, is a civil law system rather than a common law system like in Australia[4]. A civil law system relies on a legislative framework and not case law or judge-made law as in a common law system.

For this reason, the legal system in China is essentially based on legislation. Court decisions do not constitute binding precedents. However, court decisions can be persuasive to courts dealing with claims with similar facts, in particular those decisions made by the Supreme People's Court, the High Court at provincial or municipality level and those decisions selected and published by the Gazette of the Supreme People's Court.

The National People's Congress, and its standing committee, the Supreme People's Court, as well as the State Council may give opinions on the interpretation of laws and regulations so as to resolve uncertainties and ambiguities. Interpretations may also be issued by government agencies responsible for the interpretation of specific laws. These interpretations carry legal effect.

In addition, Communist Party Officials may also have varying interpretations of these laws that they apply at the local level — which may also vary on a case by case basis.

There is sometimes not full transparency in the implementation of laws and regulations. A government department will often issue an "internal rule" which may or may not be released to the public, providing stipulations on how that particular department should treat issues it might face.

Clearly this can pose some potential difficulties for would-be investors. It highlights the importance of establishing an understanding and connection with the responsible government department to first seek clarification on regulations and other legal matters. It also highlights the need to seek specialised legal advice.

China's accession to the World Trade Organisation (WTO) on 11 December 2001 means doing business in China should become easier, more transparent and more like doing business in other jurisdictions. Some of the main implications include:

a. Greater ease in entering the Chinese market:
   China has committed to opening more industries following the WTO accession. The reforms in mergers and acquisitions law also provide more options for foreign investors to enter the market.
b. Access to the service sector:
   China has committed to increasing transparency in its regulation of the service sector, to publishing information on the licensing system and the approval process, to ensuring that the licensing system is not itself a barrier to trade, and that the regulatory authorities are separated from the entities they regulate. The opening of sectors will be phased over a number of years and also in terms of the proportion of foreign ownership allowed.
c. Access to information:
   Under the WTO, China has undertaken to address the issue of opaqueness of some laws and policies by publishing information, including all legislation dealing with areas such as foreign exchange control, information on review of administrative actions, list of government authorities responsible for approving or regulating services sectors and investment licensing procedures and conditions.
d. Protection of intellectual property:
   Revisions have been made to IP laws to allow better protection. China has also committed to providing effective civil enforcement procedures for IP rights holders.

At the same time, many Australian businesses report ongoing problems with China's implementation of its WTO commitments and significant barriers to entry for businesses remain.

4. Like Hong Kong, Macau has a separate and independent legal system from the rest of China. but Macau has a legal system based on civil law derived from Portuguese law.

Hierarchy of Laws and Regulations

The Constitution is at the top of the hierarchy of laws in China. Below the Constitution, laws generally fall within the following categories (in order of precedence):
(a) laws passed by the National People's Congress or its Standing Committee;
(b) national level administrative regulations passed by the State Council;
(c) departmental rules promulgated by ministries and ministerial level committees;
(d) provincial level regulations; and
(e) city level regulations.

In general, if there are inconsistencies between the categories of laws, the order of precedence above will apply.

5.2 Contracting

Some overriding issues to consider in contracting with Chinese entities, whether it be for a long-term arrangement or a one-off sales contract, include:

A. CONTRACT LAW

The *Contract Law* (Contract Law) applies to domestic and foreign contracts formed after the implementation of the Contract Law. Chapters 1 to 8 of the Contract Law set out the general principles applicable to all contracts. Chapters 9 to 23 deal specifically with certain types of contracts. An English translation of the Contract Law is available for download from the International Section of the BCSE website.

B. GOVERNING LAW

Article 126 of the Contract Law provides that the parties to a contract with a "foreign element" may choose the governing law, unless otherwise stipulated by law. "Foreign element" includes a foreign contracting party, the subject of the contract being located outside China, or rights and obligations that occur outside China. In general, contracts requiring approval of the Chinese government authorities usually require Chinese governing law or the contract may not be approved. Otherwise, given the limitations of Chinese law, the parties should push for English, Hong Kong or other non-Chinese legal jurisdiction.

C. BREACH OF CONTRACTS

Article 107 of the Contract Law further provides that if a party breaches a contract such party "shall bear the responsibility of continuing performance [i.e. delivery of specified activity etc], undertaking remedial measures or compensation, etc". To seek continuing performance by the breaching party, it is not necessary for the claimant to demonstrate that monetary damage has occurred. However, this course of action, may be denied if:
(v) specific performance is impossible in law or in fact;
(vi) the nature of the obligation is such that continuing performance is not suitable or the cost of continuing performance is too high; or
(vii) the claimant fails to request continuing performance within a reasonable period of time.

D. TERMINATION OF CONTRACTS

Article 68 of the Contract Law provides for termination of the Contract if a party to the contract, whose obligations/performance under the contract follows (is subsequent to) the obligations/performance of the other party, has "accurate and confirmed evidence" that:
(i) the other party's business is in "serious deterioration";
(ii) the other party is "transferring the assets or reducing the capital in order to avoid paying its debts";
(iii) the other party has lost "business reputation"; or
(iv) the other party is involved in other circumstances indicating that it is losing or may lose its ability to perform.

E. MONETARY DAMAGES

Article 113 of the Contract Law stipulates that the amount of monetary damages shall be "equal to the loss caused by the breach, including the benefit which could have been received if the contract were performed. However, in determining the level of monetary compensation consideration is also given to the value of the activity etc as estimated at time of entering into the contract not at time of breach.

F. LIQUIDATED DAMAGES

Article 114 of the Contract Law provides that the parties may stipulate that the party in breach shall pay the other party a definite measure of liquidated damages. A party may petition to the People's Court or an arbitral institution for the purposes of:
(i) increasing the amount, if the liquidated damages stipulated are lower than the loss incurred; or
(ii) reduce the amount appropriately, if the liquidated damages "grossly exceed" the loss incurred.

This definition of liquidated damages is significantly different to the notion of liquidated damages under common law jurisdictions like Australia.

6 Investing in China

6.1 Direct foreign investment

There are generally three forms of direct foreign investment into China:

1. Equity Joint Venture (EJV);
2. Cooperative Joint Venture (CJV); or
3. Wholly Foreign-owned Enterprise (WFOE).

These investment vehicles are collectively referred to as Foreign Investment Enterprises (FIEs).

6.1.1 EQUITY JOINT VENTURE

The legal framework for EJVs is fairly well developed, because this is the form of foreign investment with the longest history (nearly 30 years). An EJV is a limited company incorporated by at least one Chinese party and at least one foreign party to conduct business approved by the relevant government body in China. The foreign party must hold a minimum of 25% equity in an EJV.

The hallmark of an EJV, as compared with a CJV, is that the profits from an EJV must be distributed in proportion to each party's respective capital contributions to the EJV's total registered capital.

During the term of an EJV, typically between 15 and 30 years, investors cannot recover their capital, except:

a. on liquidation, if the company is solvent;
b. by transferring their interest, which cannot be completed without government approval and which is subject to pre-emption rights of the other party or parties to the joint venture; or
c. by reduction of capital, which also requires government approval and is unlikely to succeed.

Upon termination and liquidation, the assets of an EJV or the sale proceeds are distributed in accordance with each party's equity stake.

6.1.2 COOPERATIVE JOINT VENTURES

A CJV may be structured either as a form of partnership, in which case it will not be a legal person under Chinese law, or as a Chinese legal entity in the form of a limited liability company.

Unlike an EJV, the profits of a CJV are not divided in proportion to each party's share of the registered capital. Instead the profits are distributed in accordance with the terms of the CJV contract which the parties have agreed upon. Investors in CJVs, as in EJVs, are also subject to legal restrictions regarding the transfer of equity interests and the withdrawal of registered capital during the term of the contract.

However, it is possible, subject to obtaining governmental approvals and within certain limits, for the foreign investor to a CJV to recover its full capital contribution during the joint venture term. At the end of the CJV, the fixed assets of the CJV are usually then transferred to the Chinese party for no consideration.

6.1.3 WHOLLY FOREIGN-OWNED ENTERPRISES

A WFOE is a Chinese limited liability company that is 100% foreign controlled by one or more foreign investors. It is generally preferable for a foreign investor to choose this form of investment over EJV or CJVs, unless Chinese law dictates that the investment cannot take the form of WFOE.

WFOEs are encouraged to export their products, or failing that, to use technology for manufacturing sophisticated products, but this is not a mandatory requirement.

Article 10 of the WFOE Regulations provides that to establish a WFOE, the following documents must be submitted to the approval authorities for approval:

a. a written application for the establishment of the WFOE;
b. a feasibility study report;
c. the articles of association for the proposed WFOE;
d. a list of board members and the legal representatives of the proposed WFOE;
e. the foreign investor's incorporation documents and evidence of credit standing;
f. the local government's written approval of the project proposal;
g. a list of materials to be imported; and
h. other necessary documents.

6.2 Investment companies

A number of multinationals for which China plays a critical strategic role have begun establishing investment companies (otherwise known as "umbrella companies") to act as the vehicle for their investments in China.

The regulations on investment companies define an "investment company" as a company that engages in making direct investments within China. The "umbrella" structure of such investment companies referred to in Chinese law closely resembles what would be called a "holding company" in Australia.

The investment company is considered in Chinese law as a "legal person" having an independent legal entity with legal person status. These are nearly always WFOEs, EJV or CJV holding companies are rarely approved.

The start-up costs for an investment company are considerably higher than a representative office (see below) or a traditional Foreign Investment Enterprise (FIE) and the statutory requirements are no doubt intended to ensure that only "blue chip" multinationals that are financially committed to China can apply.

6.3 Common features of foreign investment enterprises

6.3.1 CAPITALISATION

As noted above, for an EJV and CJV, the foreign party must hold a minimum of 25% of the company's registered capital. EJVs and CJVs must also comply with the debt/equity ratios shown in Table 3.

Subject to certain limitations and verification procedures, parties to an FIE may make their contributions to the registered capital of the FIE in the form of cash, tangible property (e.g. equipment), intangible property (e.g. intellectual property rights) and, in the case of the Chinese party, land and buildings.

TABLE 3:
JOINT VENTURE COMPANIES' DEBT TO EQUITY REQUIREMENTS

Total Investment Amount	Registered Capital
Less than or equal to USD 3 million	At least 70% of total investment amount
More than USD 3 million but less than or equal to USD 10 million	At least 50% of total investment amount (except if the total investment amount is less than USD 4.2 million, in which case, the registered capital must not be less than USD 2.1 million)
More than USD 10 million but less than or equal to USD 30 million	At least 40% of total investment amount (except if the total investment amount is less than USD 12.5 million, in which case, the registered capital must not be less than USD 5 million)
More than USD 30 million	At least 33.3% of total investment amount (except if the total investment amount is less than USD 36 million, in which case, the registered capital must not be less than USD 12 million)

6.3.2 SCOPE OF OPERATIONS

Companies in China are only permitted to engage in activities expressly approved by the relevant approval authority and contained in the "scope of business" as it appears on their Business Licence.

Unlike in some jurisdictions, it is not possible to include in the business scope a sweeping, catch-all phrase permitting the company to engage in "all other legally permitted activities." Therefore, the description of an FIE's proposed activities in the establishment documents must be broad enough to include all contemplated activities of the FIE, while at the same time, narrow enough to be acceptable to the government approval authorities.

FIEs are generally restricted to selling only those products which they actually manufacture in China. This means FIEs may not generally, for example, import products of the foreign investor for on-selling in China or provide services in respect of products that the FIE does not manufacture in China.

6.3.3 APPROVAL AUTHORITY

The State Council has vested the approval authority for direct foreign investment in China in the Ministry of Commerce (Mofcom).

Mofcom delegates the authority to approve foreign investment projects to its local branches, the various Bureaux of Commerce (BOCs), according to the amount of the investment and the nature of the investment project.

As Table 4 shows, projects within certain investment amounts can be approved locally or by Mofcom, whereas larger projects must be approved at the central level by the State Council.

Generally, Mofcom is the examination and approval authority for WFOEs.

TABLE 4: INVESTMENT APPROVAL AUTHORITIES

Investment Amount	Approval Authority
Less than USD 30 million	Authorised BOC and other designated entities
More than USD 30 million but less than USD 100 million	NDRC and Mofcom
Equal to or more than USD 100 million	State Council

6.3.4 APPROVAL PROCESS

The approval process for EJVs and CJVs should, subject to the existence of industry-specific regulations and dependent upon the level of approval, proceed as follows:

Approval of the project proposal

1. The Preliminary Approval, referred to in Chinese as '*lixiang*', is obtained from the National Development and Reform Commission or its local branches.
2. Asset appraisal
3. Notice of examination and approval of an FIE name
4. JV contract, articles of association and ancillary contracts
5. The signed joint venture contract and articles of association of the joint venture should be submitted by the parties (together with the Project Approval and approved Feasibility Study) to Mofcom for examination and approval.
   Approval certificate for the establishment of the JV issued by Mofcom (or its local delegate).
6. Business Licence
7. Following receipt of the approval certificate, the joint venture is required to register with the State Administration of Industry and Commerce (SAIC) within 30 days and the SAIC will issue the business license.
8. Registrations
9. Various registrations must be carried out with the local government bureaux. These include tax, customs, labour, statistics, financial and foreign exchange registrations, among others.

Be aware that establishing a new FIE can be very time consuming. Waiting a year or more to conclude negotiations, conduct feasibility studies and obtain approval to commence operations is not uncommon.

6.4 Selecting an appropriate investment structure

6.4.1 JOINT VENTURE VERSUS WFOE

There are no hard-and-fast rules as to which type of investment structure is preferable. In all cases, this strategic investment decision will depend on a number of factors that vary from transaction to transaction, including:

1. the priority the investor places on controlling technology, intellectual property and overall operations of the FIE;
2. the need for access to established sales and distribution channels;
3. the need for a pre-trained work force;
4. the use of existing facilitates and/or a particular site owned by a Chinese party; and
5. restrictions on foreign investment in a particular industry.

Generally, however, both EJVs and CJVs suffer from various drawbacks. As the joint venture form is restrictive, it is usually only advisable to use this form if laws or regulations, or the Chinese company with which the foreign investor wishes to cooperate, require that the joint venture form must be used. For example, an investment in a renewable energy project cannot be by means of a wholly foreign owned company, and therefore an EJV (or CJV) must be established. Note that the Clean Development Mechanism (CDM – see section 11.3) rules in China dictate that foreign parties are allowed to participate in Chinese CDM projects but they cannot wholly or majority own the projects.

For these reasons, it is common to include a clause in the joint venture contract providing that the Chinese party agrees to transfer its equity to the foreign party as soon as the relevant regulation changes to allow wholly foreign ownership.

Some of the commonly cited problems of working with joint ventures are as follows:

1. the Chinese party can veto certain proposals (e.g. assignments of interest, termination, merger);
2. the foreign investor often takes on former liabilities, including excess workers;
3. there is a greatly increased chance of IP leakage; and
4. there are likely to be Foreign Corrupt Practices Act (FCPA) or other anti-corruption issues, which can sometimes affect the foreign investor, given the diverging corporate practices between Chinese-run companies and those of most foreign investors.

There are some advantages of joint ventures, for example access to an existing network of contacts (if the Chinese partner is well-established). In addition, the local government may look favourably on a project if it sees that a local company is working successfully in equity cooperation with a foreign investor.

6.4.2 EJV VERSUS CJV

Compared with EJVs, CJVs tend to offer more flexibility for the parties in determining the terms of capital contribution, share of profit and liability, return of investment, etc.

Foreign investors often, for example, use the CJV structure where their Chinese partner lacks the financial resources or other assets to contribute to the JV. CJVs have typically been the preferred commercial vehicle in China for joint construction and management of hotels, commercial complexes and infrastructure projects.

6.5 Mergers and acquisitions

6.5.1 MERGERS

If FIEs are eager to break into newly-opened sectors, a merger between an existing FIE and a domestic entity may be a more effective and efficient way to proceed.

Mergers are defined in Chinese law as a complete amalgamation of share capital between two or more entities, followed by the dissolution of one or both of the original entities.

Under the Merger Regulations, a merger is not allowed unless all the participating parties are incorporated either as a company limited by shares or as limited liability companies. In addition, for the FIE concerned, its registered capital or co-operation contributors must have been fully paid up in accordance with the relevant joint venture contracts and/or articles of association, and it must also have actually commenced operations. Therefore, a newly established FIE will not be able to merge. Further, the registered capital held by foreign investors in entities resulting from any merger must not be less than 25%.

6.5.2 ACQUISITIONS

Foreign investors can acquire Chinese domestic enterprises by the purchase of equity or assets.

Equity acquisitions are divided into:

1. purchases of equity in a domestic enterprise from its existing shareholders; and
2. acquisitions of newly issued equity (i.e., an increase in registered capital) of a domestic enterprise.
3. asset acquisitions also include two types:
   a. establishment by a foreign investor of an FIE which purchases the assets of a domestic enterprise; and
   b. purchase by a foreign investor of the assets of a domestic enterprise which are used as capital contribution to establish a new FIE.

If, as a result of the transaction, the foreign investor's interest in the domestic enterprise is less than 25%, the company's business licence must be marked "Foreign investment less than 25%," and the company will not enjoy the tax incentives and other benefits available to an FIE. However, it will still be regarded as an FIE.

The most common reason for foreign investors to prefer acquiring interests in an existing FIE over establishing a new FIE is to take over an established and ongoing business operation with all relevant approvals, licences and permits for carrying on such an operation intact. This can reduce the time consuming bureaucracy involved in establishing a new FIE.

6.6 Indirect investments

Given the length of time and relatively high start-up costs involved in establishing FIEs, some foreign companies opt instead to undertake what is commonly characterised as "indirect" investment in China.

Indirect investment can be made through:

1. establishment of representative offices;
2. contracting;
3. contracted manufacturing;
4. technology transfer;
5. technical assistance and transfer arrangements and/or contracted production (e.g. production under a licence arrangement). Foreign entities may also purchase "B" shares of domestic Chinese entities.

6.6.1 REPRESENTATIVE OFFICES

Establishment of a representative office in China is subject to registration with the State Administration of Industry and Commerce (SAIC) or its local delegate.

A representative office may only engage in "*indirect business operations to represent its head company in conducting business liaison, product introduction, market surveys and research, and technological exchange within the scope of business of that company.*"[5]

Although there is no clear guidance as to what are and are not considered "direct business activities," the following activities are generally considered to be outside the scope of a representative office's lawful operations:

1. engaging in revenue generating activity;
2. entering into "economic" (i.e. commercial) contracts in its own name or the name of its head office;
3. collecting payments in connection with sales and purchases; and
4. providing services to entities other than the head office.

As compared with FIEs, the procedures for setting up a representative office are relatively simple and the capital outlay is generally less. Foreign companies that have established representative offices also enjoy a number of privileges which are technically unavailable to unregistered foreign companies (e.g. the ability to legally lease offices, hire local employees and distribute promotional materials identifying the company as having an office in China).

The biggest drawback of a representative office is the restriction on conducting direct business activities.

6.6.2 CONTRACTED MANUFACTURING

In certain circumstances a foreign investor may prefer to enter into a manufacturing licence agreement (Manufacturing Agreement) with a Chinese manufacturer, rather than establish a manufacturing joint venture or WFOE. Such an arrangement may, for example, be appropriate if the foreign party lacks actual manufacturing experience and/or wishes to "test" production in China before making an equity investment. In other instances, foreign companies may decide, that only a joint venture or WFOE, will permit them to maintain suitable levels of control over production and intellectual property rights.

The actual terms of a Manufacturing Agreement will vary widely from transaction to transaction depending on the scope of production (i.e. will finished or semi-finished products be produced), required controls on IP rights, designated sales market (i.e. export, domestic or both) etc. Under a "typical" arrangement, however, the foreign party would grant the Chinese manufacturer a non-exclusive right to manufacture and package products at the manufacturer's cost according to designs and specifications provided by the foreign party. Such arrangements typically involve IP licences under which the manufacturer may, for example, reproduce products protected by design patents and affix the foreign party's trademarks/trade

5. From Article 4 of Detailed Rules of MOFCOM for the Implementation of the Provisional Regulations governing the Examination, Approval and Administration of Resident Representative Offices of Foreign Enterprises issued by MOFCOM on 13 February 1995 and effective on the same date.

dress to the products. Where technology is licensed as part of the arrangement, the parties will need to consider the potential implications of the Chinese technology import laws.

Critical to almost any Manufacturing Agreement will be carefully drafted provisions which ensure that the foreign company can effectively monitor and control product quality and adequately protect the licensed IP rights. Before implementing such an agreement, the foreign company should also secure registrations in China for all relevant IP rights (e.g., design patents, trademarks) or at least start the process for securing such rights by submitting relevant registration applications (see Section 9 for further information on IP protection).

Careful consideration must also be given to the potential tax consequences of such arrangements. For example, the foreign party could be liable to pay Chinese enterprise income tax on sales concluded by the Chinese manufacturer if the foreign party's relationship with the Chinese manufacture is deemed to be a "permanent establishment" of the foreign party for China enterprise income tax purposes. Where domestic sales are emphasised or mandated, the foreign party will also want to take steps to ensure that its Chinese manufacturer can properly remit foreign exchange to the foreign party.

Contracted supply

In addition to the investment considerations outlined above, Australian businesses looking to partner with Chinese firms for product supply should undertake at least the usual level of due-diligence to ensure potential associates or contractors are financially secure and have the capacity to meet product supply requirements, including delivery terms, schedules and product quality. This should include viewing and testing product samples and witnessing appropriate product certification as well as seeking external references and undertaking manufacturing facility visits as appropriate.

7 Foreign currency restrictions and remittance of profits

Foreign exchange matters in China are managed by the State Administration of Foreign Exchange (SAFE). In general, denomination and settlement in foreign exchange within China is prohibited.

SAFE has its website at www.safe.gov.cn releasing all the laws, regulations, rules, circulars and opinions which are in Chinese. SAFE has not yet established an English website, but English versions of major laws and regulations can be obtained on www.isinolaw.com (although you need to be a member).

However, most rules, circulars and opinion do not have English translations available which makes it difficult for foreign investors because many specific issues can only be answered by those circulars or opinions.

7.1 Opening a foreign exchange account

Generally, a foreign company without any establishment in China cannot open a bank account in China. A representative office of a foreign company and FIEs are allowed to have foreign exchange accounts in China.

7.2 Foreign currency procedures overview

The procedures on foreign currency, especially those related to current account items, have been relaxed in the last several years, but foreign businesses must still obtain and keep documentation of their transactions or risk being unable to remit their profits overseas.

When dealing with a foreign exchange issue, you should follow these general steps:

1. identify which category it belongs to – current account or capital account;
2. identify if SAFE approval is required – sometimes a current account item matter may need SAFE approval (e.g. payment of loan interest);
3. identify what level of approval is needed (local or central); and
4. identify the documents which must be presented to SAFE or the banks.

Further detail in relation to the definitions of current and capital account items and regulations governing foreign exchange issues is provided in the supporting China Business Environment Review, available from the BCSE website, International section.

8 Taxation

8.1 Foreign enterprise income tax

The taxation of FIEs is governed primarily by the *Income Tax Law of the PRC for Enterprises with Foreign Investment and Foreign Enterprises* (Income Tax Law). The Income Tax Law applies to FIEs and foreign companies which either have places of business in China that engage in business operations or those without places of business in China but which obtain income from sources within China.

Foreign enterprise income tax is based on business profits, including dividends, interest, rents or income from transfer of property. In general, FIEs and foreign companies which have a place in business in China are subject to an income tax rate of 33%. However, preferential tax benefits may also be available depending on the nature and the location of the business within China.

Foreign invested enterprises engaged in energy production are generally entitled to a reduced income tax rate of 15% coupled to an initial two year tax holiday during commercial operation and a further three year half-tax rate period.

At the same time, the Chinese government has stated that tax breaks enjoyed by FIEs in China are destined to come to an end, now that the country has become a member of the World Trade Organisation.

In general, profits of foreign enterprises in the nature of dividends or branch profits are not subject to any withholding tax when remitted outside China. Foreign enterprises with no establishment in China but which derive income from China (for example, royalties under a technical services agreement) are still subject to foreign income tax at a rate of 20%. The payer of income to the foreign enterprise is responsible for withholding the tax payable to the relevant tax authority in China.

8.2 Other taxes

FIEs are generally subject to VAT, which is a goods and services tax, at the basic rate of 17%. A reduced rate or refunds of VAT may apply in certain circumstances, for instance in relation to exported items. The rules for export refunds are fairly detailed; specialist advice should be sought if further information is required on this issue.

FIEs are subject to business tax. In general, the business tax rate is 5%. For construction related projects, the rate is 3%.

Stamp duty ranging from 0.005% to 0.1% is levied on 'taxable instruments'. Taxable instruments include contracts for sale and purchase, processing, design and construction, lease, warehousing, transportation, loans and insurance.

Other taxes include land VAT, urban real estate tax, city maintenance and construction tax and education tax.

8.3 Tax incentives

For the renewable energy sector, Article 26 of the Renewable Energy Law (see section 11.1) indicates that business activities listed in the Guidance Catalogue for Development in the Renewable Energy Sector will be eligible for certain tax incentives. At the time of writing, however, the details of such incentives have not yet been published.

9 Protection of intellectual property rights

Protection of IP rights has emerged as an area of some concern for many foreign firms engaged with the Chinese market. This subject is dealt with more extensively in the 'Business Environment Review' that can be accessed via the BCSE's website.

IP Australia recently conducted market research on the issue of Australian businesses protecting intellectual property in China and how IP Australia could best assist them access the information they need. In response to this research, IP Australia is developing a toolbox of resources to assist Australian IP owners trading in China to better use the Chinese IP system. IP Australia has also recently launched a new section on their website providing specific information on protecting IP in China: www.ipaustralia.gov.au/resources/china_introduction.shtml.

It is encouraging to note that in line with its accession to the WTO China has made significant effort in establishing a legal framework for the protection of IP rights.

In summary, the main forms of IP rights protected under the current Chinese legal system are patents, trademarks, and copyrights.

- Patent rights are governed by the *PRC Patent law* and related regulations. Foreign patent-holders are also protected by the Paris Convention as well as the Patent Co-operation Treaty.
- The registration, administration and protection of trademarks and service marks are governed by the *PRC Trademark Law* and related regulations.
- Copyright is protected under the Copyright Law of the PRC and the Implementing Regulations of the Copyright Law.

9.1 Enforcement of IP rights

There are two basic routes for enforcing IP rights. IP owners may either pursue legal action in the courts, or seek administrative relief through the government appointed IP bureaux.

1. Civil action:
   The IP owner may file a lawsuit against infringers for damages through a lawyer registered in China. In this respect, the IP owner should prepare detailed comprehensive evidence and papers trail of both ownership and infringement of IP rights.
2. Administrative action:
   Conducting a raid is by far the most popular method of dealing with IP infringement. The IP owner or its representative may present evidence to the responsible local administrative authority who will then decide whether the evidence is sufficient to merit a raid.

Infringers may also be criminally sanctioned.

3. Criminal enforcement:
   The *PRC Criminal Procedure Code* provides for criminal prosecution of copyright and trademark violations. Maximum penalties are seven years in jail and fines equal to seven times to the pirate's illicit turnover. For patents, although the *PRC Criminal Procedure Code* does not criminalize patent infringements, it provides criminal sanctions where a party reproduces the patent number or patent notice without authorisation of the patent owner.

   One of the characteristics under the IP system is that it permits IP owners to pursue "private criminal prosecutions" against infringers such that criminal actions can be filed by the IP owner directly with the Chinese criminal courts without the involvement of Chinese prosecutors.

Part C:
China's Renewable Energy Environment

10 Renewable Energy Development Potential

In just eleven years, from 1993 – 2004, China has grown from being one of the largest exporters of coal to being an importer of oil and coal to meet its energy needs. This reliance on fossil fuel generation, powering China's booming industrialisation and urbanisation have contributed significantly to China being the second largest emitter of greenhouse gases, accounting for one seventh of world emissions.

The surging increase in electricity demand is stimulating market opportunities for all power generation technologies, and renewable energy has a strategic role to play not only in terms of greenhouse gas emissions, but also as a legitimate and indispensable component of energy security. The Chinese government has indicated expansion of renewable energy utilisation with ambitious, but achievable targets for renewable energy development looking out to 2020.

TABLE 5:
NATIONAL TARGETS FOR RENEWABLE ENERGY DEVELOPMENT

	2004 GW (AAG)*	**2010** GW (AAG)	**2020** GW (AAG)
Wind-power	0.76 (35%)	5 (37%)	30 (20%)
Solar Electricity (PV)	0.065 (30%)	0.3	1.6
Solar Electricity (Thermal)	—	0.05	0.2
Hydropower	100	160	300
of which small hydropower	35 (15%)	60 (9%)	85 (4%)
Biomass	2 (18%)	5 (16%)	30 (20%

*AAG = Average Annual Growth
Sources: NDRC 2020 Renewable Energy Development Plan & CREIA

The policy environment for renewable energy development in China is discussed in more detail in Section 11.

10.1 Solar Photovoltaic (PV)

Generally speaking, China has a very good solar resource, for example being on average 50% higher than Germany, the world's current leading market for solar PV systems. In most regions, the annual average daily solar radiation is greater than 4 kWh/m2 (i.e. on a par with Melbourne) and up to 7 kWh/m2 in Tibet (similar to the solar resource in Alice Springs). There is excellent potential for solar energy applications and life and livelihoods improvements that such services can deliver, particularly in remote north and western China (Tibet, Ningxia, Gansu, Xinjiang, Qinghai and southern Inner Mongolia). These regions have sparse population, are less easily accessible and have a comparatively underdeveloped economy.

Approximately half of China's 75 MW of installed PV capacity (generation) is used for remote and rural households supply. This market is currently growing at around 20% per annum, and will see further very large increases driven by rural electrification and development projects over the next five to ten years. Telecoms and professional applications currently account for over one-third of capacity installed to date.

Interestingly, Sichuan has the third highest PV installed capacity share despite being one of the lowest insolation regions.

TABLE 6:
INSTALLED SOLAR PV CAPACITY BY PROVINCE

Province	**Share of total PV capacity**
Tibet	42%
Gansu	6%
Qinghai	25%
Inner Mongolia	4%
Sichuan	11%
Shanxi	0.6%
Xinjiang	9%
Others	2.4%

Source: CREIA Renewable Energy Market Study

Rural electrification is expected to remain the largest market for solar PV in the short term (to 2010) and will still provide sizeable market opportunity (order of 10-15 MW pa) to 2020. However, in the medium and longer term, grid-connected opportunities in large cities (such as

DISTRIBUTION OF SOLAR POWER DENSITY IN CHINA

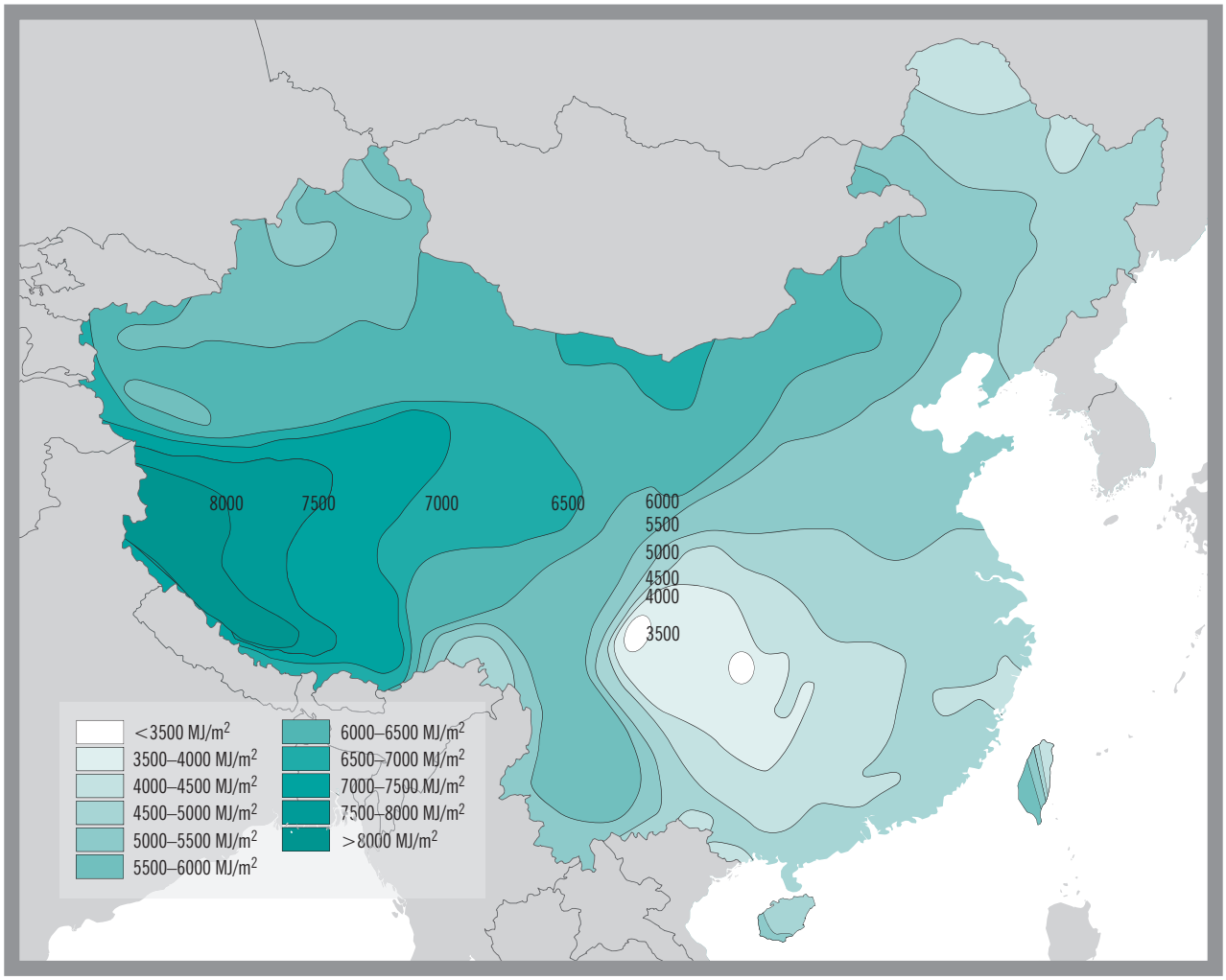


TABLE 7:
MEDIUM AND LONG-TERM TARGETS FOR SOLAR PV DEVELOPMENT

Year	**Target** (MW)	Stand-alone remote PV (MW)	Grid-connected urban PV (MW)	Desert systems (MW)	Other commercial (MW)
2010	300	150	100	20	30
2020	2000	300	1000	200	100
2050	20% of total power generation†				

†Potential market for unelectrified townships and villages is estimated at 3,000 MW
Source: NDRC Medium and Long-term Development Plan for Renewable Energy

the 100,000 roofs program in Shanghai) and major desert-based systems are expected to become significantly more important as the NDRC's mid and long-term renewable energy development plan targets indicate (see table 7 above).

The rooftop PV program will commence within the next five to ten years and will be largely focused on the Beijing and Shanghai municipalities, and the provinces of Jiangsu, Guangdong and Yunnan. In Beijing there are specific opportunities associated with the 2008 Olympic Games, while Shanghai has opportunities linked to both the World Expo building and the Asian Games, alongside ambitious plans for a 100,000 solar rooftops initiative.

10.2 Solar Thermal

At this stage solar thermal systems are not used for power applications in China. However, under the 11th five-year plan (2006-2011), China will commence a solar thermal power R&D program.

By contrast, solar water heating (SWH) is already very well developed in China, with an annual production exceeding 13 million m^2. Within China approximately 8% of households now use solar water heaters and a total of 70 million m^2 of collectors were installed as of the end of 2003. The annual market has grown by an average 27% since 1998. Almost 90% of SWH sales are of vacuum tube systems. Combined collector-storage tank systems accounted for less than 1% of sales in 2004, and are a market segment that has been on the decline both in terms of total volume and share of the market for the past five years.

The local SWH industry is very significant, with some 1000 manufacturers throughout China as at the end of 2004. However only about 10% of these are competitive, based on their brand quality and sale/service strategies. There are 10 large manufacturers with annual sales over CNY 100 million (AUD 16.5 million).

China's solar water heater market is currently located mainly in Shandong, Jiangsu, Yunnan, Anhui, Hebei, Guangdong, Zhejiang and provinces in the northwest (see Table 8 below for the market share of each area). These areas can be divided into the following three categories: (1) economically developed regions on China's eastern seaboard (Shandong, Guangdong, Jiangsu, and Zhejiang); (2) regions with rich solar energy resources (Yunnan and Northwest China); and (3) long-standing production bases of solar water heaters (Beijing, Hebei, Shandong, Jiangsu, Zhejiang, Yunnan).

Some 60% of all solar water heater sales are to the suburbs of major cities and to the districts and counties below the prefecture level. In other words, the key markets are those areas that might be said to be intermediate between urban and rural areas. The majority of products are purchased at a price below CNY 1500.

At the same time, there are some emerging product and market development opportunities, notably in relation to integration of solar water heaters into buildings. This has already attracted strong attention from relevant national-level and local government departments, architects and real estate developers.

TABLE 8:
SOLAR WATER HEATER MARKET DISTRIBUTION BY REGIONS

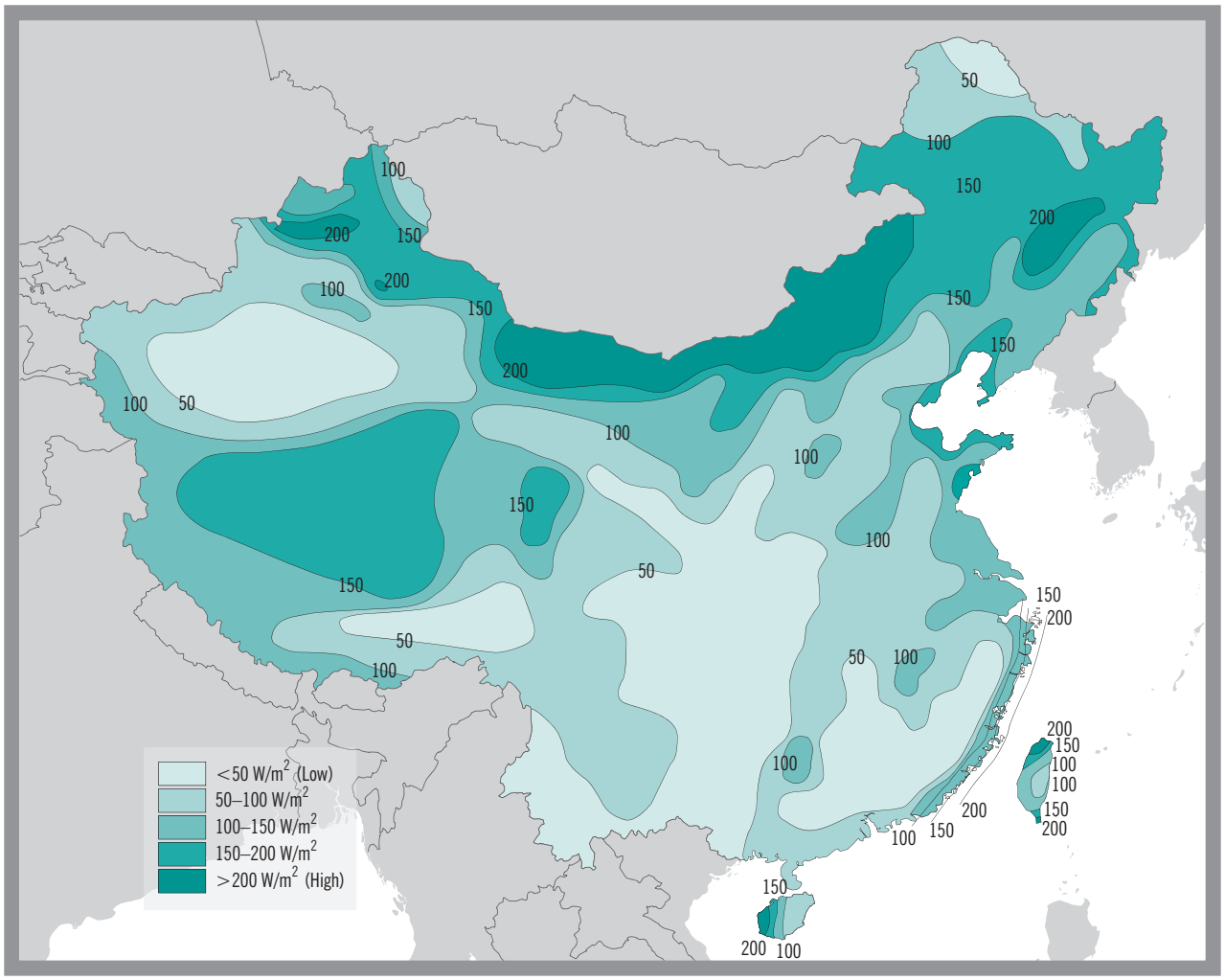
Region	Market share
Shandong	16%
Yunnan	8.0%
Jiangsu	15.6%
Anhui	3.5%
Zhejiang	15.0%
Guandong	3.5%
Northwest	15.0%
Beijing & Tianjin	3.0%
Hunan & Hebei	10.0%
Others	10.4%

Source: CREIA Renewable Energy Market Study

NDRC's official target for SWH system development envisages 150 million m^2 by 2010 and 270 million m^2 by 2020 respectively, with industry analysts predicting that the total installed capacity could reach 500 million m2 by 2050. That would equate to 120 billion kWh equivilant in 2020 and 300 billion kWh equivilant in 2050.

10.3 Wind sector

DISTRIBUTION OF EFFECTIVE WIND POWER DENSITY IN CHINA



China's exploitable wind energy potential is estimated at about 1,000 GW[6], approximately one quarter of which is land-based and the remainder off-shore. Areas with rich wind resources are located along the southeast coast and nearby islands, but the major technical potential for onshore wind is located in the north and west of the country. Inner Mongolia has almost one quarter (61.8 GW) of the technical potential, while Qinghai and Xizang (Tibet) together account for a further 64 GW. Xinjiang in the north-west (34.3 GW), Heilongjiang in the north-east (17.2 GW) and Gansu, particularly the Hexi Corridor (11.4 GW), together account for a further 25%.

At the end of 2004, the total grid-connected wind-power capacity was over 760 MW, 40% of which came on line in 2003 and 2004. A massive step change in installed capacity was experienced in 2005 with further 500 MW of generation capacity added.

6. The estimate is based on analysis at just 10 meters above ground level. The potential may be double at a 60m hub-height.

TABLE 9:
INSTALLED WIND POWER BY REGION – DEVELOPMENT FROM 2004 TO 2005

		2004		2005	
Province	**Technical Potential (MW)**	**WTGs (No.)**	**Capacity (MW)**	**WTGs (No.)**	**Capacity (MW)**
Hebei	6,100	66	35	143	108
Inner Mongolia	61,800	224	135	260	166
Liaoning	6,100	202	126.5	203	127.5
Jilin	6,400	49	30	143	109.5
Heilongjiang	17,200	47	36.5	70	57.5
Shanghai	(Jiangsu) 2,400	5	5	18	24.5
Zhejiang	1,600	69	34.5	69	34.5
Fujian	1,400	24	13	75	59
Shangdong	3,900	47	33.5	100	84
Guangdong	1,900	177	86.5	271	140.5
Hainan	600	19	9	19	9
Gansu	11,400	74	52	74	52
Ningxia	1,500	65	55	133	113
Xinjiang	34,300	224	113	296	181.5

Sources: CREIA Renewable Energy Market Study & China Hydro Consultants, Ltd.

China has the local capability to fully manufacture wind turbines of 750 kW or less (majority of installations to date have used wind turbine generators in this range). However, China is close to establishing the necessary national capability for megawatt-scale turbines. This is an important development given the Government's requirement for local product content of wind farm componentry.

China also has about 200,000 stand-alone small-scale wind turbines with installed capacity of 25 MW that provide electricity to rural households located in remote areas, notably on the Qinghai-Tibet plateau.

It is clear that there is considerable scope for further wind energy development in China, and the policy framework is gradually evolving to encourage greater private sector, commercial wind farm development, through local government approval processes. NDRC's target for wind power capacity is 30 GW by 2020 and the figure is expected to rise to over 100 GW by 2030. Five provinces have been earmarked as priorities for wind energy developments in the 2020 timeframe:

- Inner Mongolia, 30% of the national total
- Jiangsu, 15% of the national total
- Hebei, 10% of the national total
- Jilin, 10% of the national total
- Gansu, 10% of the national total

Guangdong, Xinjiang and Fujian will each account for around 5% of the national total.

10.4 Bioenergy

Bioenergy presents a considerable opportunity throughout the whole country. China's main biomass resources are agricultural wastes, residues from the forestry and forest product industries and municipal waste.

Agricultural wastes are widely distributed. Crop stalks alone exceed 600 million tons per annum, of which the resource suitable for energy production potential is estimated to deliver 12,000 PJ annually.

Wastes from agro-processing together with manure from livestock farms in theory could yield nearly 80 billion m^3 of biogas.

Residues from forestry and forest product industries represent a resource equivalent to 8,000 PJ per annum. The implementation of China's Natural Forest Protection Program and Sloping Cropland Conversion Program is expected to increase forestry waste, offering 12,000 PJ per annum by 2020.

Energy crops also offer potential commercialisation opportunities. Chief among the energy crops that are suited to growing in China are canola and other edible oil plants and some plants that grow in the wild, such as sumac, Chinese goldthread, and sweet broomcorn. By 2020, such crops could potentially yield over 50 million tons of liquid fuel annually, including over 28 million tons of ethanol and 24 million tons of bio-diesel.

Municipal solid waste (MSW) and landfill gas (LFG) are also counted in China as biomass from the view of energy utilisation. At present, the annual MSW output is over 100 million tons, more than 80% of which is disposed in landfill.

China currently mainly utilises biomass energy through conventional combustion technologies, although gasification, liquefaction and power generation technologies are gradually being developed.

- Gasification is mainly via anaerobic fermentation at the present time (with some 12 million household biogas digesters and over 1,500 industrial-scale biogas plants), though technology for the direct gasification is being developed.
- Biomass liquefaction technology is in the investigative and experimental phase in China. Currently the main technologies developed and in use are ethanol fuel technology and bio-oil technology. China has already established two large ethanol fuel production bases, one in the north and one in the south, with a total annual production capacity of over one million tons. Production of bio-oils in China has reached about 500,000 tons annually.
- Biomass power generation in China is mainly combined heat and power (CHP) in sugar mills and power generation using rice husks (installed capacity of almost 2,000 MW). Other types of power generation via gasification or hybrid fuel technologies have not yet reached significant scale in China.

10.5 Hydropower

10.5.1 SMALL SCALE

Small hydropower (SHP – which is defined in China as installations under 50 MW) is very well developed already in China. Indeed the nation leads the world in the fields of design, engineering, management and installation of SHP. At the same time the 30 GW installed to date represents just a quarter of the estimated 125 GW potential capacity. The resource is widely distributed, including sites in over 1,600 counties (or cities), spread over 30 of China's provinces (or provincial-level municipalities). Over 50% of the potential capacity and 65% of the counties are located in south-west China.

The Chinese Government has implemented policies that strongly support SHP and has included small hydro in its rural electrification plans. About one-third of China's counties already rely on small hydro as their main source of electricity. SHP stations also form a critical component of rural energy development under the Western China Cropland Conversion Program and Western China Energy Development Program, with special funds available from Government bonds for small-scale hydropower development.

While Chinese SHP construction capability is world-leading, there remains considerable scope for improvement in control systems and general operational management, including automation.

10.5.2 LARGE SCALE

Like Australia, China is a nation with a proud heritage of engineering innovation and achievements in the field of large-scale hydropower development.

At around 100 GW, hydropower (including small hydro) currently accounts for approximately one-fifth of China's total installed electrical generating capacity. This represents less than a quarter of the hydropower potential estimated at 400 to 600 GW, 70% of which is located in the less-developed west of the country, in areas such as Sichuan, Guizhou, Yunnan, Guangxi, Gansu and Qinghai.

Foreign investment has been crucial to much of China's hydropower development, with independent power producers drawing on finance largely from Hong Kong, US and Europe for projects ranging from tens of MW to several GW. Typically these are build, operate and transfer (BOT) schemes.

In mid 2006, Xinhua news agency reported plans for construction of a dozen hydroelectric plants on the upper reaches of the Yangtze River over the coming two decades. The projects on the Jinsha River and Yalong and Dadu tributaries will add over 90 GW of new capacity.

11 Renewable Energy Development Framework

11.1 Renewable Energy Law

As noted previously, the Chinese Government has established strong short to medium-term targets for renewable energy development. Originally expressed as an intent to meet 10% of gross energy consumption by 2010, the target was adjusted to 15% by 2020 at the Beijing International Renewable Energy Conference in November 2005. The revised target includes large hydropower.

The principal national policy framework underpinning the strategic goals is the Renewable Energy Law (REL), which was endorsed by the NPC's Standing Committee in February 2005 and came into effect on January 1 2006. It is important to appreciate that the REL does not itself stipulate specific binding targets; what it does do is establish the responsibilities of the State energy authorities to set targets and for government at all levels to prepare renewable energy development and utilisation plans that are to be implemented after approval of the State Council. The REL also sets out the support mechanisms that are permissible and stipulations that must be adhered to for future renewable energy development in China. Again, it does not generally directly define, for example, the level of incentives that may be available for renewable energy development, or cover specific regulations, but it provides for and necessitates their definition by the relevant authorities.

It does, however, include some notable clauses which dictate, for example, that:

- Energy utilities are obliged to buy renewable energy from licensed projects within their franchise area at the accepted bid price and must make compensation in the event of failure to comply with the mandatory purchase;
- Reasonable excess costs associated with the mandatory purchase of grid-connected renewables projects may be passed on to the customer; and
- That various financial and fiscal measures will be made available for example, to support pilot projects, resource assessments and surveys, local equipment manufacture and construction of certain remote and rural renewable energy projects.

As the REL is only a framework law, detailed implementing regulations will continue to be issued under it. Three regulations have recently been released by NDRC which provide some of the further definitions, notably in respect of the feed-in tariffs and distribution of costs for grid-connected renewable energy projects, the responsibilities of network operators and generators and approval regimes for renewable energy project developments, and the eligibility criteria for accessing the financial and fiscal incentives.

These are respectively:

- *Provisional Administrative Measures on Pricing and Cost Sharing for Renewable Energy Power Generation* (Document No.: NDRC Price [2006] No. 7);
- *Relevant Regulations on the Administration of Power Generation from Renewable Energy* (Document No.: NDRC Energy [2006] 13); and
- Guidance Catalogue for Development in the Renewable Energy Sector.

English translations of the REL and the accompanying regulatory documents are available for download from the International section of the BCSE website. This area will be continually updated as further regulations and guidelines emerge.

At this stage, only the pricing subsidy for certain biomass projects is confirmed. A subsidy of 0.25 CNY/kWh will apply, in addition to the 'yardstick' tariff of 'desulphurising coal-fired generating units'. That effectively means that an additional premium of just over AUD 0.4 per kWh will be available to cover the incremental costs of biomass projects compared to baseline coal-fired power generation plant. The baseline varies between different regions and will be defined by the State Council's pricing authorities. The subsidy applies for 15 years from the start of plant operation.

The additional cost will be borne by a surcharge on all customers' electricity consumption, with the exception of those in the counties and lower administrative divisions and those engaged in agricultural activities. In part, it is in effect a social equity surcharge, acknowledging the relative income levels of urban and rural households, and also the significantly larger (on average three times higher) consumption of urban electricity customers.

Similar feed-in tariffs will be established for solar, ocean and geothermal projects in the near future.

For wind projects, the picture is somewhat less clear as the government has only gone so far as to say it will set guidance prices. There remains a competitive element as developers then have to bid for a project licence, with the licence to be awarded to the developer that pledges the lowest generation price.

The situation may change at the end of 2006, when there is an opportunity to adjust the provisional pricing measures.

11.2 Rural Development and Electrification

Development Challenges

Today, there are 300 million fewer people living in poverty in China than at the end of the 1970s, including 220 million fewer in rural areas. Nevertheless, several tens of millions of Chinese citizens have yet to be lifted out of poverty, notably some 30 million rural poor, many of whom are located in the remote upland areas of western China[7].

Alongside this, and partly in recognition of the growing disparity between China's 'new urban rich' and the vast majority of the rural population, President Hu Jintao and Premier Wen Jiabao, have raised 'Xiaokang' (the all around moderately prosperous society) as a goal for mainland China to reach by the year 2020. This acknowledges the need for achieving balance between urban and rural areas and between different regions of the country but is not purely focused on economic growth. It also recognises the need to balance economic and social development, ensure appropriate protection of natural resources and achieve domestic development in harmony with the policy of foreign participation. Achieving these balances is likely to create a strong continuing opportunity for renewable energy.

11.2.1 BRIGHTNESS PROGRAM

China's Brightness Program, which was initiated by the State Development and Planning Commission (now NDRC) in 1996 as part of the International Brightness Program for rural electrification, has a very strong poverty alleviation and development focus. It uses renewable energy – particularly small-scale wind and solar PV – to bring electricity to homes and villages in China's less developed regions, notably Inner Mongolia, Xinjiang, Tibet, Yunnan, Sichuan, Qinghai, and Gansu. The target is to provide the equivalent of 100 W[8] per person to 23 million people by 2010.

The program is funded partly by the central government and partly by the provinces. Generally, there is also some foreign investment; for example, the Government of Holland is supporting the "Silk Road" Brightness Program in Xinjiang, while the German Government has given technical and financial support for the Brightness Program in Yunnan, Qinghai, Inner Mongolia, and other areas.

At present, four provinces have established Brightness Program 'Project Proprietors' to develop projects associated with the program. The Program Coordinator, Beijing Jikedian Renewable Energy Development Center, maintains a list of companies and products that are interested in supplying to Brightness Projects. International companies can participate by applying to the coordinator, stating the company name, address, legal contact, brief company introduction, declaration of participation, details of products and relevant certification and their prices. Note that companies that wish to be considered will have to submit products for a one-year field test, the results of which will be passed to the Project Proprietors. Project Proprietors may subsequently invite the company to bid for projects, which are typically issued on an annual basis.

11.2.2 TOWNSHIP ELECTRIFICATION

In 2002, the NDRC launched its Township Electrification (Song Dian Dao Xiang – SDDX) Program, with the objective of electrifying almost 1000 townships in eleven provinces that did not have a public electricity supply. This is in effect a component of the Brightness Program and was conceived to rapidly bring modern energy services to 300,000 families, almost 1.3 million people in the under-developed north, west and central regions of China.

The two year project earmarked 721 townships and villages to receive centralised PV, PV solar home systems and PV/wind hybrid systems (total 18.4 MW), and 268 for small hydropower stations with a total capacity of almost 293MW. A number of systems have yet to be completed, but the vast majority are finished.

The delivery approach was not identical in each province, but typically a local project manager – such as the provincial NDRC or utility – was appointed to implement the electrification program, with specific projects awarded through competitive bidding to one or more private companies. Once installed, the operation and maintenance was generally transferred to a local (county-level) power company or government administration. The retail price of electricity varies between provinces, and to some extent between projects within the same province. Typically the tariff is between 0.5 and 2.0 CNY/kWh (approximately 0.08 to 0.33 AUD/kWh). However the sales revenue is far below the operational costs and will need to be subsidised at the national level, possibly via the electricity surcharge that has been introduced under the Renewable Energy Law.

7. UNDP Common Country Assessment 2004
8. Not every individual will receive 100 W. For instance in some locations small solar home systems of around 20 W will be the solution for households, notably for lighting.

While the SDDX has effectively completed the electrification of all townships throughout China, there are still numerous villages that are yet to be electrified. These will be addressed under the subsequent Song Dian Dao Cun (SDDC) National Village Electrification Program.

This will present opportunities particularly for PV, including solar home systems and village power stations. Although problems with the systems installed to date under SDDX have not been excessive, there is scope for system reliability improvements, notably in the area of inverters and control systems which may be of interest to Australian firms.

The initial course of action for firms interested in participating in future project developments under SDDC would be to:

1. register interest with the Brightness Program Coordinator as indicated above;
2. register interest with the Brightness provincial project proprietors and with the relevant provincial branches of the Development and Reform Commission;
3. register interest with companies that have successfully bid for township electrification projects; and
4. visit the target provinces, seek out some of the existing township systems and build relationships with the key authorities and potential partners.

11.3 Kyoto Protocol and the Clean Development Mechanism

The Kyoto Protocol builds on the United Nations Framework Convention on Climate Change, establishing legally binding targets for 'Annex I' Parties (OECD countries plus a number of 'Economies in Transition') to limit or reduce their greenhouse gas emissions. China gave its approval to the Protocol in August 2002 and is considered a 'Non-Annex I' Party.

As a non-Annex 1 country, China is a beneficiary of the Clean Development Mechanism under the Kyoto Protocol which specifically targets projects that reduce greenhouse gas emissions in developing countries.

This includes both direct emissions reductions and avoided emissions that might otherwise have arisen as a result of development using older, less efficient or more polluting technology. This might cover, for example, renewable energy generation projects that achieve the same development outcome, but with less greenhouse gas emissions than say a fossil-fuelled generator.

CDM project proponents must prepare a project design document with estimates for the emissions abatement potential of their project compared to a legitimate baseline, together with a methodology to verify the abatement. If approved, the project will be eligible to create Certified Emission Reductions (CERs) that equate to one ton of carbon dioxide. These can then be traded as a means of Annex I countries fulfilling their emissions obligations. CERs at the time of writing were between USD 3 and 6.

A recent report on CDM opportunities in China speculates that China represents at least 50 percent of the world's CDM market[9]. Renewable energy is one of the three priority areas for CDM projects identified by the NDRC, China's Designated National Authority for the CDM.

There are significant CDM opportunities from renewables projects in China, particularly large-scale wind-power, small hydropower, biomass power and landfill gas use. From 2005 to 2010, the new installed capacity of these technologies is anticipated to reach 25 GW corresponding with 37 million tons of emission reductions. From 2010 to 2020, a further 55 GW is expected from these technologies, equating to over 100 million tons of reductions. Over a typical 15 year life cycle, this may equate to some 4.8 billion CERS. In combination, all renewable projects in China to 2020 may be sufficient to stimulate 7.5 billion CERs.

9. CDM Country Guide for China, Ministry of the Environment (Japan), IGES & CREIA, 2005

11.3.1 THE CONTRIBUTION OF CDM FOR RENEWABLE ENERGY FINANCING

The contribution of CDM revenues to total project investment varies for different technologies. For wind and hydropower, sale of CERs will generate typically 10% of the total project investment. By contrast, revenue from landfill gas recovery may significantly exceed the project investment costs, potentially 10 times higher. In general, CDM revenues are one of the important factors of project financing in China. Currently almost all of the wind projects have included CDM revenues as part of their financial investment planning.

Note though, that projects approved on or after 12 October 2005 are subject to a Government levy on revenues generated from the sale of CERs. For development and utilisation of new and renewable energy (as well as methane recovery and utilisation, or energy efficiency projects) the levy is generally 2%, whereas projects involving HFC and PFC emission reductions currently attract a levy of 65%.

11.3.2 AUSTRALIA AND CDM

While Australia has not ratified the Kyoto Protocol and as such is not eligible to participate directly in the CDM, this does not exclude Australian firms from CDM project involvement. JV vehicles established in the host country, for example, have proven effective in enabling Australian firms to participate in CDM projects both in China and elsewhere (See 'Roaring 40s' Case Study, page 41). Similarly there may be opportunities for supply of products and services to Chinese unilateral CDM projects or to projects that are led by an organisation from another Party.

According to China's own Measures on Administration and Operation of Clean Development Mechanism Projects, project proponents must be Chinese invested or Chinese investment holding enterprises. Foreign parties are allowed to participate in Chinese CDM projects but they cannot wholly or majority own the projects.

Further detail on the CDM process and opportunities for CDM in China are included in the *CDM county Guide for China,* available from the CREIA website and via link from the International section of the BCSE website.

CASE STUDY

Roaring 40s

Roaring 40s Renewable Energy Pty Ltd (Roaring 40s) was formed in 2005 as a joint venture between Hong Kong based power company China Light & Power and Hydro Tasmania. Roaring 40s is pursuing wind energy development opportunities throughout China alongside China Datang Corporation (Datang), a state-owned enterprise specialising in investment, construction, operation and management of power assets.

Roaring 40s established contacts within the Chinese government (specifically in the area of renewable energy policy) through its Hydro Tasmania contacts and via a Beijing-based renewable energy consultancy. Through these contacts it was able to secure introductions with a number of the large state owned power companies including Datang.

Currently, the companies are jointly constructing a wind farm at Shuangliao, in the Jilin Province in China's North-east. The investment structure is a joint venture arrangement whereby Datang has the controlling share (51%) with Roaring 40s holding the remainder. This arrangement allows the project to register for CDM revenue as CDM projects in China require a majority China ownership. It also permits the Chinese partner to offset all the renewable energy generated from the project against its mandated renewable energy targets.

Pursuing this business in China has presented a number of challenges, but these are not insurmountable. Cultural differences exist, both in terms of day to day matters and also in respect of commercial and business matters. These can be well mitigated through the appointment of highly-skilled local personnel. Likewise, there are some unique business risks associated with doing business in China including repatriation of funds and the variance in regulatory practice from province to province. The best way of dealing with these risks is to very carefully prepare the establishment of your business presence in China and then to be closely involved in the management of your interests on an ongoing basis

Roaring 40s highlights four key points as advantageous in maintaining business relationships with Chinese counterparts:

- You have to add value. If you don't you will be taken off the project;
- The Chinese are financially secure. They are particularly seeking management and financing experience;
- Relationships require lots of goodwill from both partners; and
- Long-term partnerships are critical to the success of any business venture.

12 China Renewable Energy Market Opportunities

CREIA has undertaken a review of the Chinese market to identify a range of potential collaboration opportunities for Australian and other international partners. Comprehensive overviews of the Chinese renewable energy industry and the potential for collaboration in three key technology areas are available for download from the International section of the BCSE website.

12.1 Solar PV

In general cooperation needs are for:

1. technology investment, to establish joint venture facilities in China producing PV modules, controllers, inverters, etc, locally-based on new technologies from foreign companies; and
2. Financing investment, to support companies who are planning to scale-up and are open to shareholding by foreign companies.

The principal needs of the Chinese solar PV industry that present collaboration opportunities are:

1. Silicon feedstock supply: the rapidly increasing development of facilities for cell and module production is creating a raw material bottleneck worldwide, but particularly in China;
2. High quality inverters, especially large capacity models: Chinese inverter manufacturers are largely geared towards small inverters. Most would like to produce larger grid-interactive models for PV rooftop and desert PV systems; and
3. High quality storage batteries: especially focusing on long lifetimes for remote-region power supply systems.

12.2 Solar Water Heating

Although the SWH industry is very well developed, there are some opportunities for international cooperation, notably in relation to:

1. High quality products, especially gas or electric boosted systems for home hot water supply. In this context, 'high quality' implies systems that can supply hot water year round and 24 hours per day. Typically this would be focusing on the newly wealthy segment of the population. Accordingly, unit prices may approach AUD 650 to 1,000 per m^2, compared to the CNY 800 to 1000 per m^2 (approximately AUD 130 to 170 per m^2) typical of standard local products;
2. Building integrated systems; and
3. Large-scale systems, particularly for industrial and commercial applications.

12.3 Wind

Cooperation activities in the wind power sector include turbines and component manufacture and wind farm development. For turbine manufacturers, these generally imply initially manufacturing under license, while manufacture of other components is invariably under license arrangement or via shareholding. Project development cooperation is predominately an equity or debt shareholding.

Given the currently limited local capacity in the wind market, achieving the national target of 20 GW or beyond by 2020 will require a considerable international cooperation and injection of knowledge and expertise from abroad, particularly in relation to wind-farm development.

12.3.1 HUMAN RESOURCE DEVELOPMENT

Renewable energy technology R&D talent in China is generally weak and widely dispersed, with only a few dozen specialists throughout China conducting wind power policy studies, project planning, and R&D activities. Organisational capacity building and personnel training are clearly urgently needed to support the 2020 strategic objectives, which will require an estimated 100,000 research persons and engineering technicians. This includes technical training for wind power generator design, manufacture, installation, operation, and repair.

Likewise, there is a severe shortage of expertise in the technical consultancy and technical services areas for wind farm preparation and developer support, pre-construction consultancy, wind energy surveys, site selection, planning, design, construction supervision, management services, installation engineering, operational management, monitoring, repair and follow-on services, etc.

12.3.2 TECHNOLOGICAL DEVELOPMENT

Alongside the human resource shortage, the emphasis on national and local content of wind generator technologies has become a temporary bottleneck restricting China's wind turbine generator (WTG) system development. Currently about 82% of WTG systems installed in China are imported; recently, the NDRC issued a special edict that indicated all future turbines should consist of 70% local content. Alongside WTG system design, component manufacturing and wind turbine testing and authentication (to name a few) present opportunities for foreign investment in China. Local manufacturers need to continuously improve their technology and product quality, as well as reduce their costs and prices to build wind farm developer's confidence in using homemade WTG systems. This has created a natural symbiosis opportunity for Chinese businesses to partner with experienced foreign firms.

Another technological area that may present opportunities for Australian and other foreign organisations is in relation to reducing the impact of uncertainty in forecasting and maximising the contribution of intermittent energy sources, particularly wind, for example through despatchable storage technology.

12.3.3 RESOURCE ASSESSMENT

Lack of reliable data is emerging as a common problem for site selection and project planning. In particular, there is currently no data relating to the offshore wind resource. Again, this presents opportunities for specialist firms seeking to penetrate the China market.

13 Project Approval Procedures

One of the principal concerns of international investors considering project developments in China is lack of familiarity with procedures for project approval. The following section provides a summary of the key considerations for capital project approvals. More detail is provided in the supporting documents available from the International section of the BCSE website.

13.1 Approval procedures for capital construction projects

In general, projects with a total investment value of CNY 200 million or above must be referred initially to the provincial government and subsequently will be reported to the central government.

For renewable energy projects, a capacity limit applies before projects are required to be referred to the national government. Projects of 50 MW and above, irrespective of the investment, must be reported to NDRC for approval. Projects under this threshold may be approved by the provincial DRC.

The documentation required for capital project approval consists of five elements:

- The project proposal;
- The feasibility study report (including bid plan);
- The concept design;
- The annual investment plan; and
- The construction starting report.

The five components should be submitted to the Development and Planning Committee at the provincial level or to the National Planning Committee as appropriate. Hi-tech industrialisation projects – which covers all wind and solar projects – are afforded a slightly simplified process by combining the project proposal and feasibility study report.

13.2 Approval procedures for solar

There is no special approval procedure for solar PV, since it is still considered to be in the demonstration stage. However, as well as the standard approval for capital projects, grid-connected PV projects must negotiate a connection agreement with the local utility.

13.3 Approval procedure for wind

Wind farm development approval procedures are relatively well defined as follows:

- Make an agreement with the local government, at county level or above for site specification (usually the city or county government planning bureau, land administration or environment bureau);
- Erect wind meter for resources measurement;
- Develop and submit a pre-investment report or pre-feasibility study for approval. The feasibility report should be validated by an appropriately qualified institution. *(This can be an international engineering consultancy);*
- Obtain grid connection permission (There may be a number of sections involved with renewable energy in a given power utility. The utility will advise who is responsible for grid-connection permission);
- Obtain land use document *(from Land Management Bureau);*
- Obtain environmental impact assessment report *(from qualified institution);*
- Obtain bank guarantee letter;
- Submit necessary documents for approval (50 MW and above should go through NDRC, below that can go through provincial level government approval). Note: If the total investment is over CNY 200 million, it will be referred by NDRC to State Council and the Premier's office will make the final decision);
- After approval, the wind turbine procurement, installation and construction activities can commence; and
- As soon as installation is complete, an audit will be required to re-calculate the total investment. This is required for final purchase price calculation. *(A certified institution should be hired to undertake the pricing calculation. This must be submitted to the Price Bureau of NDRC for approval).*

Note: there are no fees attached to the approval procedures.

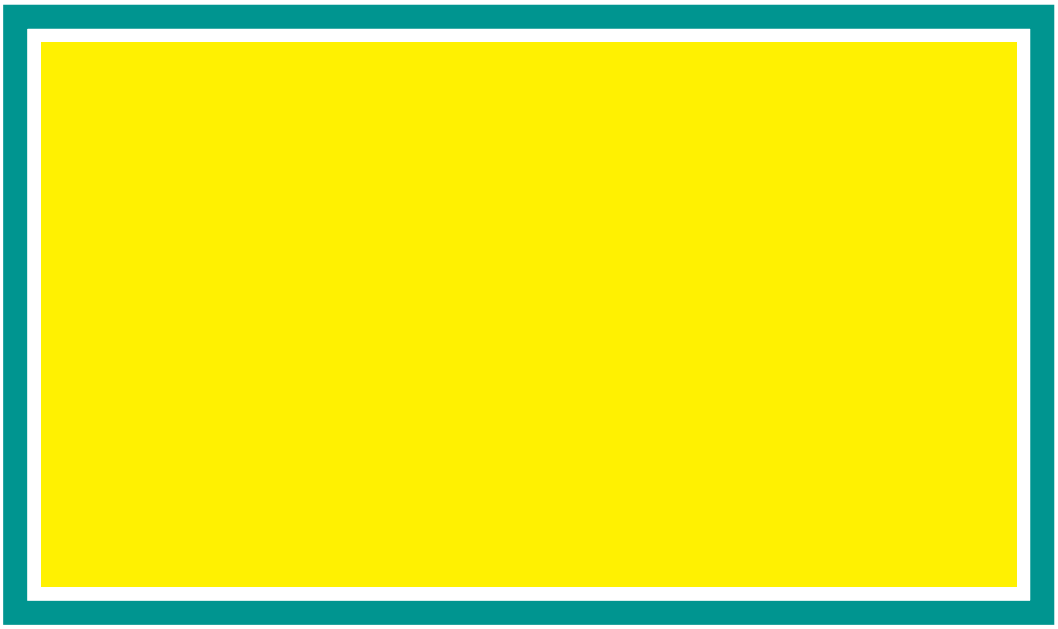
13.3.1 THE WIND CONCESSION APPROACH

The procedure for concession projects is somewhat different, involving a competitive bidding process:

- The Provincial Planning Commission (PPC) reports to NDRC for the selection of wind farm sites of 100 MW or more. The final decision to select the sites for wind concessions rests with the Energy Bureau of NDRC (EB);
- PPC arranges the bidding specification document for the tender and issues the bidding announcement;
- Interested parties buy the tender document and prepare bid response;
- An expert group randomly selected from a pre-approved assessors list review the bids and submits an assessment report to the PPC;

The final award decision rests with PPC who will negotiate with the winning bidder to establish a contract. In the event that the first choice does not sign the contract, PPC will commence negotiations with the second choice, and so on.

Foreign manufacturers and investors are eligible to participate in the concession bids on the same terms as local organisations, provided they adhere to the terms and obligations identified in the tender documents. Typically three or four wind concession projects are announced each year. The main national concession projects are handled by the China National Machinery & Equipment Import & Export Corporation. The bidding documents generally tend to be only in Chinese.



Part D
Helping Hands

14 Australia-China Co-operation on Climate Change Issues

14.1 Australia-China Climate Change Partnership

Australia and China entered into a bilateral partnership arrangement to cooperate on climate change issues in September 2003. This was enhanced in August 2004, when Ministers from both countries signed a Memorandum of Understanding (MoU) on climate change activities.

The MoU emphasises both countries' recognition that climate change is a serious issue and common desire to seek a global response that is economically efficient, environmentally effective and sustainable over the longer term. This extends to working together on climate change and related activities to enhance scientific understanding, pursue greenhouse gas emission reductions, build capacity to address and adapt to the possible impacts of climate change, facilitate mutually beneficial opportunities in relevant technologies, products and expertise, and to explore possibilities for global responses to climate change.

Under the terms of the MoU, the Australia-China partnership facilitates and encourages participation by business, industry, government and the scientific community from both countries to develop and implement mutually beneficial projects and activities under a number of climate change themes.

Renewable energy is one of the expressed themes for cooperation.

Australian and Chinese government officials conducted a bilateral workshop in Canberra from January 16-17 2006, where future project priorities for the Australia-China partnership were agreed. Engagement on renewable energy related activity was identified as the second highest priority.

The Australia-China partnership is one of a number of such bilateral agreements administered by the Australian Greenhouse Office (AGO) within the Department of the Environment and Heritage.

The Australian Government allocated AUD 5.1 million for 2004-08 specifically for the implementation of projects to engage developing countries in climate change action and that deliver mutual practical benefit for Australia and partner countries. Activity under the Australia-China partnership and engagement with the Pacific through the US and New Zealand bilateral partnerships have been identified as priorities for this measure.

The Bilateral Partnerships Program provides various forms of support for approved projects, including:

- Facilitated contact with government agencies and officials in partner countries;
- Access to bilateral partnership events, including workshops and meetings;
- Assistance in identifying potential collaborators in partner countries; and
- Grants for projects involving collaboration with developing countries.

Future projects under the Bilateral Partnerships Programme will be developed according to specific priorities for each Partnership as agreed between Australia and the relevant partner country.

Further information on the Australia-China and other bilateral partnerships can be accessed through the AGO's website: www.greenhouse.gov.au/international/partnerships

14.2 Asia Pacific Partnership on Clean Development & Climate

Australia and China are both signatories to the six-nation Asia Pacific Partnership on Clean Development & Climate (APP) which is creating a *'voluntary, non-legally binding framework for international cooperation to facilitate the development, diffusion, deployment and transfer of existing, emerging and longer term cost-effective, cleaner, more efficient technologies and practices among the Partners through concrete and substantial cooperation so as to achieve practical results'.*

Central to the AP6 vision is a *'conviction of the urgent need to pursue development and poverty eradication. By working together we will be better able to meet our increased energy needs and associated challenges, including those related to air pollution, energy security, and greenhouse gas intensity.'* The Partnership will focus on expanding investment and trade in cleaner energy technologies, goods and services in key market sectors. The Partners have approved eight public-private sector task forces , which includes renewable energy and distributed generation (REDG) These joint government/industry Task Forces are formulating action plans and possible 'flagship' projects in a number of cooperation areas, including renewable energy and distributed generation. The Task Force will focus on the most promising technologies and applications, particularly rural, remote and peri-urban applications, where renewable energy and distributed generation applications can be cost competitive.

The Work Plan for the REDG Task Force acknowledges that the emerging nature of many renewable energy technologies means that there can be market and technical impediments to their uptake, such as cost-competitiveness, awareness of technology options, intermittency and the need for electricity storage. The Task Force will initially concentrate on:

- Facilitating the demonstration and deployment of renewable energy and distributed generation technologies in Partnership countries;
- Identifying country development needs and the opportunities to deploy renewable energy and distributed generation technologies, systems and practices, and the enabling environments needed to support wide-spread deployment, including in rural, remote and peri-urban applications;
- Enumerating financial and engineering benefits of distributed energy systems that contribute to the economic development and climate goals of the Partnership;
- Promoting further collaboration between Partnership members on research, development and implementation of renewable energy technologies including supporting measures such as renewable resource identification, wind forecasting and energy storage technologies;
- Supporting cooperative projects to deploy renewable and distributed generation technologies to support rural and peri-urban economic development and poverty alleviation; and
- Identifying potential projects that would enable Partners to assess the applicability of renewable energy and distributed generation to their specific requirements.

To support Australia's role in the Partnership, at the inaugural Ministerial meeting in Sydney in January 2006, the Australian Prime Minister announced an investment of AUD 100 million over five years, including 25% specifically earmarked for renewable projects. Refer http://www.asiapacificpartnership.org/default.htm

14.3 Asia-Pacific Economic Cooperation Energy Working Group

The Asia-Pacific Economic Cooperation (APEC) Energy Working Group projects seek to maximise the energy sector's contribution to the region's economic and social well-being, while mitigating the environmental effects of energy supply and use. Further information is available at www.apec.org.

15 International Assistance for Development in China

Over the past decade, China has been the beneficiary of considerable multi- and bilateral assistance which has focussed on renewable energy for development. The World Bank, United Nations Development Program (UNDP), Global Environment Facility (GEF), Asian Development Bank (ADB) and European Union (EU) have all implemented substantial projects that provide a range of assistance for renewable energy industry development and general socio-economic development using renewable energy services. Recently, the Renewable Energy and Energy Efficiency Partnership (REEEP), with funding from a variety of governments world-wide, has launched a number of projects particularly related to renewable energy and energy efficiency policy and finance. The bilateral development agencies of countries such as Australia, Canada, Denmark, Germany, Japan, Norway, Sweden, UK, USA to varying degrees have also supported specific renewable energy initiatives, or contributed to components of the large multi-lateral projects.

For the well-established multi-lateral projects and programs, new opportunities for participation are available. The processes by which companies can monitor project opportunities and position themselves for participation in future projects are well worth exploring.

15.1 Ongoing Projects

15.1.1 UNDP/GEF CAPACITY BUILDING FOR THE RAPID COMMERCIALIZATION OF RENEWABLE ENERGY IN CHINA (CRESP)

As the title implies, this project of the UNDP and GEF sought to speed up the commercialisation of the key renewable energy technology applications, through supporting technology transfer and capacity building of business people and decision makers.

Some USD 14.33 million were committed under CRESP Phase 1 by the UNDP and other bilateral donors (including AusAID) to the project which commenced in March 1999 and is due to finish in 2006. Amongst other outcomes, the project has served to create the Chinese Renewable Energy Industries Association, implemented a number of village biogas and hybrid village power demonstration systems, developed standards and a testing and certification centre for solar water heaters and provided training for wind resource assessments.

The development objective of the Follow-up to the new Renewable Energy Scale-Up Program is to demonstrate early success in large-scale renewable energy investments with participating local developers in one pilot autonomous region and one pilot province. The project comprises two components: a 100 MW wind farm at Huitengxile in the Inner Mongolia Autonomous Region and a bundle of small hydro construction and rehabilitation projects in Zhejiang Province (rehabilitation of eleven small hydropower plants and construction of seven new small hydropower plants). It is expected to finish in September 2010. Refer http://www.bcse.org.au/

15.1.2 NDRC/WORLD BANK/GEF CHINA RENEWABLE ENERGY DEVELOPMENT PROJECT

The China Renewable Energy Development Project (REDP) is a five year project scheduled for completion at end June 2007. The project aims to use state-of-the-art and cost-effective wind and PV technologies to supply electricity in an environmentally sustainable way and to provide modern energy to dispersed rural households and institutions.

The project has a number of aims including reducing the cost of solar PV, improving the product quality and after-sales service for PV in remote rural areas and generally stimulating the rural PV market. A direct grant will be provided to PV system companies to assist them to market, sell, and maintain 10 MWp of PV systems, an estimated 300-400,000 systems, in Qinghai, Gansu, Inner Mongolia, Xinjiang, Tibet, Western Sichuan and adjacent areas. The systems are expected to be purchased mainly by households and institutions living in isolated rural areas without access to electricity. The companies are likely to receive a GEF grant of USD 1.50 per Wp of PV capacity, per system with a capacity of 10 Wp or greater. This financial support aims to assist

companies to: (a) improve PV product quality; (b) improve warranties and after-sales service; (c) strengthen business capabilities; and (d) increase marketing efforts.

The direct grants will be complemented by support to the companies to assist PV market development. The Project Management Office (PMO) will manage the Program, which will overcome barriers and develop markets for PV systems. To strengthen institutional capabilities for PV quality assurance and project management, designed activities will be supported.

The Technology Improvement Component will provide financial assistance to industries producing wind or PV equipment, to accelerate technology innovation aimed at reducing costs while providing high quality products and performance.

The project also includes specific support for construction of a 20 MW windfarm in Shanghai and associated capacity building, and has other market development components.

The project is funded by a USD 27 million GEF grant, USD 13 million loan from the World Bank, and around USD 102 million from Chinese co-financing. The project has built a list of PV companies approved to offer the REDP grant. Approval is based on an assessment of the companies' experience, capability and business plans. Various cost-shared grants are also available to support, for instance, local businesses' marketing and general business development needs, and to assist with product development and certification. The Project Management Office under NDRC, is responsible for overall project coordination. For the Windfarm Component, SP is responsible for coordinating project implementation.

There is limited scope for foreign firms to participate in the REDP. However, the local industry development activities have created a de facto 'preferred partners' list for international firms seeking to work with local businesses in serving the western / rural development market. Companies that have successfully gained approval for the REDP sales grant are also strongly supporting the Brightness / Township and Village electrification projects. The current list of qualified suppliers and the project specifications and opportunities can be downloaded from the Project Management Office REDP website: http://www.ndrcredp.com/english/

15.1.3 EUROPEAN UNION / CHINA ENERGY AND ENVIRONMENT

The five-year, 42.9 million Euro EU-China Energy Environment Program (EEP) is geared towards strengthening EU-China co-operation in the area of energy, with an overarching ambition to promote sustainable energy use and improved environmental quality and health conditions in China. Although it is nominally a bilateral arrangement, the recent reciprocal untying of international assistance across the board between Europe and Australia may entitle Australian businesses to support the EEP objectives and participate in EEP contracts.

Renewable energy is one of the four major program components, with specific priorities in Strengthening Policy Development Capacity, Biomass Resources for Rural Energy Provision, Off-Shore Wind Energy Resources and Rural Energy Support Training Centres. This will present a range of technical assistance (consultancy) opportunities, as well as some equipment demonstration opportunities; for instance, the Biomass component will address both institutional issues (policy development and capacity building), as well as feasibility and demonstration projects in selected provinces.

Specific Opportunities will be advertised on the Tenders and Contracts area of the Program website: www.eep.org.cn

The Ministry of Commerce (MOFCOM) is the executing authority of the Program, while the Energy Research Institute of NDRC, the Ministry of Science and Technology and China National Petroleum Corporation are involved in the Program implementation.

15.1.4 REEEP

REEEP, the Renewable Energy and Energy Efficiency Partnership, is a Public-Private initiative which was launched at the Johannesburg World Summit on Sustainable Development in August 2002. The partnership is funded by a number of governments including Australia, Austria, Canada, Ireland, Italy, Spain, The Netherlands, the UK, the USA and the European Commission, and is focused on structuring policy initiatives for clean energy markets and facilitating financing mechanisms for sustainable energy projects.

The Partnership operates via a number of regional Secretariats coordinated by an International Secretariat based in Vienna, Austria. The REEEP East Asia Regional Secretariat is hosted by CREIA with support from BP and the Norwegian Embassy in Beijing.

The REEEP East Asia Secretariat coordinates REEEP activities in countries including China, Democratic People's Republic of Korea (DPRK – North Korea), Japan, Mongolia, and the Republic of South Korea. It maintains close links to other countries in the region including Australia, which hosts the South East Asia and Pacific Secretariat with support from the Australian Greenhouse Office. The BCSE hosts the Secretariat for SE Asia and the Pacific: refer: www.bcse.org.au/international/reeep/.

Program priorities are developed through a bottom-up process of regional consultation. Individual regions may, however, define specific areas of focus that address identified regional needs within these priorities.

In China, there is potential for REEEP to work with existing initiatives to improve energy efficiency in the township and small village enterprise sectors. REEEP could also help in the development of rural energy service companies (RESCOs), which have a significant role to play in increasing access to rural energy and ensuring the long term sustainable operation of village power systems. Setting up RESCOs is a complex task and the REEEP could help RESCOs in China by citing successful policy frameworks which have facilitated RESCOs development elsewhere.

Calls for proposals in line with the program's global and regional priorities are issued periodically (there have been five rounds to date). These are posted on the REEEP website (www.reeep.org) and are also circulated to partner members. Membership of REEEP is free of charge and can be accomplished by registering on the website.

15.2 Procurement Processes

15.2.1 WORLD BANK

China is a major recipient of World Bank assistance. In May 2006, the Bank unveiled a new Country Partnership Strategy, and a plan for annual assistance of USD 1.5 billion for the next five years. In particular, the aid is targeted at supporting the less developed inland provinces, in line with the Chinese Government's policy of xiao kang. This includes a focus on reducing poverty and inequality, by expanding basic social services in the rural areas.

The World Bank has a very clear and well-established process for procurement of goods and services, including consultancy opportunities. Companies seeking to do business with the Bank at the operational or corporate level, or indeed companies that may be seeking grants for development projects, should familiarise themselves with World Bank processes and requirements. These are clearly presented on the 'Business Center' area of the Bank's website: www.worldbank.org/opportunities

For both operational procurements (e.g. hardware and works), and consultants, an awareness of the Bank's project cycle is important. Key procurement opportunities for goods and services are advertised online through the 'dgMarket' database, which has tenders and consulting opportunities worldwide (www.dgmarket.com) as well as in the United Nation's Development Business bulletins. Consultants interested in applying to the World Bank for financed projects should pre-register with DACON via dgMarket. Additionally, for 'corporate procurement' opportunities (for example in relation to project identification), registration via the Bank's Vendor Kiosk is recommended.

In general, it is advisable to frequently monitor the development business opportunities resources and build relationships with relevant World Bank staff (both in Washington and at the country level) around specific projects. Key contacts are identified within relevant project information documents available from the World Bank website.

15.2.2 UNITED NATIONS DEVELOPMENT PROGRAM

UNDP procurement opportunities for goods and services are advertised online at www.undp.org/procurement (http://www.undp.org/procurement/) as well as in the UN's Development Business bulletins. Companies interested in supplying to UNDP in general should register with the Interagency Procurement Service Office (IAPSO) (http://www.iapso.org/news/) and the UN Common Supplier Database (http://www.uncsd.org/), and familiarise themselves with the relevant country priorities.

UNDP has a number of dedicated country websites, including one for China www.undp.org.cn. 'Energy and the environment' forms one of UNDP China's service areas and is seen as *'essential for poverty reduction and sustainable development, and key to achieving all the Millennium Development Goals (MDGs)'.* UNDP China is now focusing mainly on policy and advocacy, working particularly with high-level government agencies like NDRC, as opposed to local level interventions.

China-specific procurement opportunities are advertised on the UNDP China website under the section 'Working with us'.

15.2.3 ASIAN DEVELOPMENT BANK

The ADB funds development projects and programs in the Asian and Pacific Regions. Australia is a Member and major contributor to ADB and, as such, Australian firms are eligible to bid for contracts and offer services for ADB financed projects. Information about ADB's requirements for goods, works, and services are provided online. Would-be suppliers should frequently monitor project development progress via the new and proposed project areas, accessible via the business opportunities area of the ADB's website: www.adb.org/Business/Opportunities. ADB conveniently lists projects by sector (e.g. energy) and a summary of all projects by country is also provided.

As with the World Bank, suppliers are advised to introduce themselves and their capabilities to, and maintain an ongoing rapport with, the relevant project officer identified in the project information documentation.

Consultants seeking to participate in ADB projects should submit a registration request online via the Asian Development Bank's DACON (companies) or DICON (individuals) systems.

16 Australian Services

The Australian Trade Commission (Austrade) is the Australian Government agency that helps Australian companies win overseas business for their products and services by reducing the time, cost and risk involved in selecting, entering and developing international markets.

16.1 How can Austrade assist companies developing business in China?

Austrade's services to Australian companies include:

- practical export information and advice;
- identification of overseas opportunities;
- on-the-ground exporting support overseas and in Australia;
- services to identify potential overseas business partners and to research and access high potential markets for Australian companies; and
- strategic export planning and network formation services.

16.2 Austrade Staff in China

Austrade has an extensive network in China with 15 offices employing 100 staff. These offices work with Australian companies to assist them in developing business in the market.

16.3 Export Market Development Grants

The Export Market Development Grants (EMDG) scheme is the Australian Government's principal financial assistance program for aspiring and current exporters. Administered by Austrade, the purpose of the scheme is to encourage small and medium sized Australian businesses to develop export markets. EMDG reimburses up to 50% of eligible export promotion expenses above a threshold of AUD 15,000.

In the 2004-05 financial year, AUD 123.9 million and 3,277 grants were paid to businesses under the EMDG scheme. For grants relating to the 2003-04 grant year (paid in 2004-05), the average grant was AUD 37,145. Over three-quarters of businesses receiving EMDG reported annual income of AUD 5 million or less.

16.4 New Exporter Development Program

Austrade offers a package of free export services designed to assist small and medium-sized Australian companies develop their businesses overseas and make their first export sale. The New Exporter Development Program (NEDP) gives Australian businesses the best possible start to exporting by providing a wide range of free services to new exporters including advice and information about getting into exporting, export coaching, and assistance on the ground in foreign markets.

For more information visit www.austrade.gov.au or call 13 28 78.

16.5 Australian Renewable Energy Exporters Network

The Department of Industry, Tourism and Resources maintains an Australian Renewable Energy Exporters Network (AREEN), as an outcome of the Renewable Energy Action Agenda agreed by the Government and industry in 2000.

AREEN has a database of approximately 70 export-ready renewable energy companies. AREEN was formed to assist the Australian renewable energy industry to take advantage of the opportunities offered by the global market for renewable energy goods and services. Austrade, the Department of Industry, Tourism and Resources and the Australian Business Council for Sustainable Energy have developed a partnership to deliver AREEN services. In 2002 AREEN organised a successful trade mission to Chile, Brazil and Mexico, which was reported to have yielded prospective business of between AUD 60-80 million. Refer http://www.industry.gov.au

17 Australian State and Territories Export Assistance

A variety of assistance is available under State and Territory government programs for Australian businesses seeking to build export partnerships. The majority of export support is generic in nature (not specifically China-focused); however there are a number of initiatives at the State level dedicated to China business development.

17.1 Australian Capital Territory

The Australian Capital Territory (ACT) has business and cultural ties with both the Chinese capital, Beijing, and Hangzhou in the Eastern province of Zhejiang. Canberra has a formal sister-city relationship with Beijing. Two-way merchandise trade was worth AUD 667,000 in 2005, making China the ACT's fifth-largest trading partner.

ACT companies can access a range of export and business development support, including certificates of origin and other export certification, and 'Tradestart' services (in association with Austrade) via membership of Australian Business Limited. Business ACT provides an online reference for exporters at http://www.business.act.gov.au/investingincanberra/businessdevelopment/act_export_assistance .

17.2 New South Wales

Bilateral merchandise trade between NSW and China amounted to AUD 12.4 billion in 2005. Sydney and Guangzhou are sister cities and numerous other relationships exist between regional NSW and Chinese cities.

The NSW Department of State and Regional Development (DSRD) offers a number of programs and services to assist NSW exporters, including an Export Advisers Network, Market Visits and Trade Missions. DSRD has also established the Sydney-Beijing Olympics Secretariat (SBOS) to support NSW companies to capture new business opportunities associated with the Beijing 2008 Olympic Games and the related redevelopment of Beijing City.

DSRD details can be found at http://www.business.nsw.gov.au .

NSW businesses can also access the membership services of Australian Business Limited.

17.3 Northern Territory

The Northern Territory Government's Trade Support Scheme (TSS) provides professional and financial assistance to NT businesses undertaking export marketing activities. Reimbursement is available for up to 50% of specified costs related to the export activity, including airfares, accommodation and marketing materials. See http://www.nt.gov.au/dcm/tradesupport/purpose.shtml .

Darwin has a sister city relationship with Haikou, the capital of Hainan Province.

17.4 Queensland

China is Queensland's second largest trading partner with merchandise trade between the two valued at AUD 4.6 billion in 2005. Queensland has a sister-state Agreement with Shanghai, while Brisbane has sister city relationships with China's biggest city, Chongqing, and with Shenzen in the dynamic east-coast province of Guangdong. Numerous other links have been established between regional Queensland and cities in China.

The Queensland State Government offers a range of export assistance including briefing seminars, experienced export managers and linkages to other export services. Additionally, the Queensland-China Council, among other activities, helps to identify opportunities for improved economic and cultural relations between Queensland and China.

The Queensland Government also maintains Trade and Investment Offices (QGTIO) in Hong Kong, Shanghai and Taipei. For more details refer to: http://www.sdi.qld.gov.au .

17.5 South Australia

Export South Australia provides details for exporters, including assistance available under the Market Access Program (MAP). Application forms for MAP can be obtained from the Export SA website. This also provides latest news including exporter networks, and provides easily accessible information for both exporters and overseas buyers. ExportSA maintains a database of exporters, and provides information online of different industry sectors including sustainable energy.

South Australia's exports to China were valued at AUD 586 million in 2005, with China the state's third largest trading partner. South Australia has a number of links with China, including a provincial link with Shandong Province and two representative offices in Shanghai and Hong Kong. Adelaide City Council has a cooperative city relationship with Qingdao, and Port Adelaide a link with Yantai (both in Shandong province).

Other links exist between Murray Bridge and Sanmenxia (Henan), Port Pirie and Suizhou (Hubei) and Whyalla and Ezhou (Hubei). See http://www.exportsa.sa.gov.au .

17.6. Tasmania

The Department of Economic Development (DED) offers a variety of assistance for Tasmanian exporters. This is generic in nature, including assistance for planning and implementing international marketing, practical seminars and workshops on aspects of exporting, such as risk management, banking, international law, insurance and customised skills development. DED also coordinates the Federal TradeStart program for new exporters in Tasmania. Details of assistance and activities can be found at http://www.development.tas.gov.au/export/newexporters.html .

Tasmania's exports to China were valued at AUD 210 million in 2005. Tasmania has a 25-year long sister state relationship with Fujian Province. Launceston and Taiyuan, the capital of Shanxi, established a sister city relationship in 1995.

17.7 Victoria

China is Victoria's second largest trading partner and third largest export destination. Two-way merchandise trade was valued at AUD 8.5 billion in 2005. Melbourne has a sister-city relationship with China's third largest city, Tianjin.

The Victorian Government's 'Access China' initiative aims to assist Victorian companies to forge new relationships with Chinese partners, market their products more effectively and/or set up an operation in China. Victorian company representatives may be eligible to access facilities and export-related assistance via Victorian Business Offices in Hong Kong, Nanjing and Shanghai. Support includes office facilities, initial market research, cultural training, introductions and networking, logistical support, agent identification and product/service evaluation.

The Victorian Department of Innovation, Industry and Regional Development hosts information online to assist firms in export related activities. More information can be found at: http://www.diird.vic.gov.au/homepage

17.8 Western Australia

Western Australia's Department of Industry and Resources (DoIR) provides a range of generic export assistance for WA businesses, including country and industry profiles, advice on market entry strategies, statistical and market analysis, and business opportunities identification. DoIR has representative offices in Hangzhou and Shanghai. Online resources include export guides, information on countries, export awards and international trade offices.

China is WA's second largest trading partner with two-way trade amounting to AUD 9.6 billion in 2005. Perth has a sister-city relationship with Nanjing in Jiangsu Province. For additional export assistance, refer to http://www.doir.wa.gov.au/ .

Different state export assistance information and programs can be found on the International section of the BCSE web site.

18 Where to from here?

In summary, China presents many exciting market and partnership opportunities for Australian renewable energy businesses. The policy framework and key government agencies are increasingly open to renewable energy development, and the environment continues to improve for private sector and foreign investment, particularly in areas of key strategic importance for the nation's socio-economic development.

Notable market opportunities for 'Australian-style' equipment, knowledge and expertise surround the Chinese Government's ongoing efforts to balance the benefits of development more equitably throughout the country. In particular, development coupled to ongoing remote and rural electrification in the central, northern, western and south-western regions appears to offer good near-term potential for stand-alone and mini-grid systems. At the same time, the wind energy and biomass sectors will present excellent opportunities in many parts of the country for the next two decades and beyond. Beyond the 2010 timeframe, significant opportunities are expected to emerge in relation to building integrated sustainable energy technologies.

Clearly though, investment and participation in China's current and future development plans, as well as partnering with Chinese organisations, does present a number of potential challenges for Australian firms. Doing business in China is not the same as doing business in Australia or many other 'industrialised' countries. China's legal framework, language, business etiquette and levels of government involvement or intervention can pose challenges. At the same time the differences are perhaps not as extreme as we might imagine and there are a wide range of resources available to help Australian firms access and sustain interests in China.

This summary has hopefully highlighted how Australian businesses might profitably approach China. In particular, while a working knowledge of the national framework is important, this approach is best undertaken in bite-sized chunks, with a focus on building a deeper understanding and establishing links at the provincial level (or lower). Relationship building is critical, so businesses need to be persistent and patient. Visits to China to meet potential partners, clients and other key stakeholders are essential.

Considerable support for initiating contacts, gaining understanding of market and partnership opportunities and developing critical on-the-ground relationships is available via Austrade, the Australia China Climate Change Partnership and other government initiatives at both federal and state levels. Additionally, there are numerous private-sector organisations – business facilitators, legal advisors, translators and so on – that can provide perspectives from both the Chinese and Australian sides. Several of these organisations, for instance Mallesons Stephen Jaques, also have a well-developed understanding of the sustainable energy sector. Within Australia, the Business Council for Sustainable Energy, and inside China, the Chinese Renewable Energy Industries Association, are cooperating to provide additional assistance to firms seeking to establish or strengthen Australia-China Sustainable Energy partnerships. Both organisations now have nominated staff that are working together to identify new opportunities and promote the bilateral renewable energy trade agenda.

Best of Success.

Glossary

AAG	Average Annual Growth
ACT	Australian Capital Territory
ADB	Asian Development Bank
AGO	Australian Greenhouse Office (Australian Government)
APEC	Asia-Pacific Economic Cooperation
APP	Asia Pacific Partnership on Clean Development & Climate
AREEN	Australian Renewable Energy Exporters Network
AUD	Australian Dollar
AusAID	Australian Government's Overseas Aid Program
Austrade	Australian Trade Commission
BCSE	Australian Business Council for Sustainable Energy
BOC	Bureau of Commerce
BOT	Build Operate Transfer
CCP	Chinese Communist Party
CDM	Clean Development Mechanism (of the Kyoto Protocol)
CER	Certified Emission Reductions
CHP	Combined heat and power (Cogeneration)
CJV	Cooperative Joint Venture
CNY	Chinese Yuan Renminbi Unit of Currency (variously referred to as Yuan, Yuan Renminbi or RMB)
CRED	Centre for Renewable Energy Development (China)
CREIA	Chinese Renewable Energy Industries Association
DED	Department of Economic Development (TAS Government)
DEH	Department of the Environment and Heritage (Australian Government)
DFAT	Department of Foreign Affairs and Trade (Australian Government)
DoIR	Department of Industry and Resources (WA Government)
DSRD	Department of State and Regional Development (NSW Government)
EB	Energy Bureau
EEP	Energy Environment Programme
EJV	Equity Joint Venture
EMAS	Export Marketing Assistance Scheme (NT Government)
EMDG	Export Market Development Grants
ERI	Energy Research Institute (China)
EU	European Union
FCPA	Foreign Corrupt Practices Act
FIE	Foreign Investment Enterprise
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Greenhouse gas
GNP	Gross National Product
GW	Gigawatt
HFCs	Hydrofluorocarbons
IAPSO	Interagency Procurement Service Office
IP	Intellectual Property
IPP	Independent Power Producer
Joule	Standard unit of energy (1 kWh is equivalent to 3,600,000 Joules)
JV	Joint Venture
kW	Kilowatt
kWh	Kilowatt hour
LDRC	Local Development and Reform Commission (China)
LFG	Landfill Gas
MoF	Ministry of Finance (Chinese Government)
MoFCOM	Ministry of Commerce (Chinese Government)
MOST	Ministry of Science and Technology (Chinese Government)
MoU	Memorandum of Understanding
MSW	Municipal Solid Waste
MW	Megawatt
NDRC	National Development and Reform Commission (Chinese Government)
NEDP	New Exporter Development Program
NPC	National People's Congress
NSW	New South Wales
NT	Northern Territory
O&M	Operation and maintenance
OECD	Organisation for Economic Cooperation and Development
pa	Per annum
PJ	Peta Joule (10^{15} Joules)
PPC	Provincial Planning Commission
PPP	Purchasing Power Parity
PRC	People's Republic of China
PV	Photovoltaic
QGTIO	Queensland Government Trade and Investment Office
QLD	Queensland
R&D	Research and Development
REDG	Renewable Energy and Distributed Generation
REDP	Renewable Energy Development Project
REEEP	Renewable Energy and Energy Efficiency Partnership
REL	Renewable Energy Law
RESCO	Rural Energy Service Companies
SA	South Australia
SAFE	State Administration of Foreign Exchange (Chinese Government)
SAIC	State Administration of Industry and Commerce (Chinese Government)
SDDC	Song Dian Dao Cun (national village electrification programme)
SDDX	Song Dian Dao Xiang (national township electrification programme)
SDPC	(Former) State Development and Planning Commission. Superseded by NDRC
SEZ	Special Economic Zone
SHP	Small hydropower
SHS	Solar (PVP Home System
SWH	Solar Water Heating
TAS	Tasmania
UK	United Kingdom of Great Britain and Northern Ireland
UNDP	United Nations Development Programme
USA	United States of America
USD	United States Dollar
VAT	Value Added Tax
VIC	Victoria
W	Watt
WA	Western Australia
WB	World Bank
WFOE	Wholly Foreign-owned Enterprise
WTG	Wind Turbine Generator
WTO	World Trade Organisation

Exchange Rates

At the time of writing (mid 2006), approximate exchange rates for currencies referred to in this document are
1 AUD = 6 CNY = 0.75 USD