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21 July 2008

The Secretary
Senate Standing Committee on Environment, Communications and the Arts
Parliament House
Canberra ACT 2600
Australia

RE: Inquiry into the *Save our Solar (Solar Protection Rebate) Bill 2008*

Dear Secretary;

Suntech Power Australia would like to submit the following for consideration by the committee as it enquires into the *Save Our Solar (Solar Protection Rebate) Bill 2008*. We appreciate the opportunity to provide input into this Bill.

Suntech Power designs, develops, manufactures and markets a variety of high quality, cost effective and environmentally friendly photovoltaic (PV) cells and modules for electric power applications in the residential, commercial, industrial and public utility sectors. We were delighted to open our flagship office in Australia in December 2007. Suntech Power Australia is keen to begin working with policymakers in Australia to craft a robust policy setting that will encourage the further development of a strong and viable renewable energy industry.

Suntech Power has a long-standing affinity with Australia. Our founder and global CEO Dr. Shi Zhengrong is an Australian citizen and developed many of his world-leading solar power technologies during his time working at the University of New South Wales.

It is important that Australia develops a strong solar power industry. A robust and growing solar sector will help reduce greenhouse gas emission, have a positive impact on our environment and create jobs in new, emerging technologies.

We support the *Save our Solar (Solar Protection Rebate) Bill 2008*. We understand the budgetary circumstances that led to the introduction of the means test. We support the government's effort to curb inflation and put downward pressure on interest rates. However, we are concerned that the means test has the potential to undermine the success of the rebate program and the growth of Australia's solar industry.

Suntech Power Australia was not aware of the Australian Government's plans to introduce a means test until after it was announced. Had we been able to be consulted, we would have disagreed with the proposal. As we do not sell directly to retail consumers in Australia, we cannot provide an accurate projected impact for the means test on our sales at this stage. However, as the world's largest solar panel manufacturer, we can provide some insights based on our extensive experience in solar markets around the world.

Once again, Suntech Power Australia welcomes the opportunity to formally put forward our view in regards to this bill. We are committed to continuing ongoing innovation, which will help us to achieve our goal of driving down the cost-per-watt of solar energy to grid parity, so that solar energy becomes a cost-effective alternative source of clean energy.

In our submission we outline our concerns about the means test on the solar panel rebate and offer some suggestions regarding the further development of the solar industry, as an integral part of Australia's approach to reducing greenhouse gas emissions. Suntech Power Australia commends the government for its strong commitment to tackle climate change. In particular, we applaud the extensive investment into the renewable energy sector through programs such as the $150 million commitment to solar and clean energy research, which includes the *Australian Solar Institute*, and the $500 million *Renewable Energy Fund*.

We ask your support for the *Save our Solar (Solar Protection Rebate) Bill 2008* to repeal the means test on the solar panel rebate. Thank you for your consideration of our comments.

Sincerely;

Jenny Lu
Regional Manager
Suntech Power Australia

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Suntech Power Australia

Submission to the Senate Standing Committee on Environment, Communications and the Arts' inquiry into the *Save Our Solar (Solar Protection Rebate) Bill 2008*

Suntech Power is a world-leading manufacturer of solar photovoltaic (PV) cells and panels. We are recognised internationally for our quality products and cutting-edge innovation. We look forward to further building our operations in Australia, and contributing to the development of renewable energy policy in Australia. For further information on Suntech Power Australia, please refer to the appendix at the end of our submission.

Below are Suntech Power Australia's key observations regarding the *Save Our Solar (Solar Protection Rebate) Bill 2008*.

1. The effect of the means test on business

Suppliers in emerging technology sectors, such as Suntech Power Australia need stability to facilitate long-term planning and to develop their position in a new market. We fear that the means test could cause substantial disruption to the solar power market and put the solar industry's reputation at risk.

As the solar rebate is a comparatively new program, many consumers are only just becoming aware of the rebate scheme. Unilaterally imposing a means test on a scheme that was designed and launched without an income-related qualifying criterion runs the risk of damaging the industry's relations with the consumer market. Many residential consumers were in the process of entering negotiations with an installer before the means test was introduced, and Suntech Power Australia fears that the means test could damage the solar installation sector's reputation in this fledgling renewable energy sector. Disruptions in solar demand will impede the success of the program as it was designed in its original format.

2. The effect of the means test on the community

Suntech Power Australia believes that income should not be a determining factor towards the take up of solar power.

Solar panel rebate recipients are the pioneers in our renewable energy sector. Be they low, middle or high-income households or businesses, recipients of the rebate are first-time investors that are making a substantial contribution to Australia's green energy future. In this respect,

program participants are helping transform the market for solar energy, thereby helping to make solar energy systems more affordable for all Australians. Given the current overall cost of a solar power system, it is not surprising that a high proportion of families and businesses on higher incomes have opted to install a solar power system and apply for the rebate. What is most important is that rebate recipients are meeting all of relevant eligibility requirements for the program and helping to secure the scheme's long-term success.

The solar panel rebate was not designed as an income assistance, or social security measure. The purpose of the rebate was to off-set the start-up costs of installing a solar power system, thereby encouraging Australian homeowners to invest in solar technology. Suntech Power Australia believe that, given the fledgling status of Australia's solar market, income should not be a factor in determining eligibility. The more clean energy megawatts that Australia installs, the better it is for the entire community. Solar power is an intrinsic public good, which is demonstrated through relieving transmission and distribution congestion, minimising climate pollution and reducing the number of new power plants; with their adverse water usage and environmental impact.

It is difficult to determine the suitable income level that will determine who is or is not eligible for a government rebate for solar panel installations. For example, is a family of four with an income of $200,000, but with high education and associated expenses "wealthier" than a family of two with $100,000 but with no such expenses? Until Suntech Power Australia can see further evidence regarding the income threshold, we conclude that a means test threshold appears to be arbitrary and artificial. It is too difficult to fairly establish the line between who gets support for solar and who does not.

Public perceptions regarding privacy and confidentiality may also create a disincentive to people looking to enter the solar power market. By requiring potential rebate recipients to reveal household income data, the application process itself could discourage some potential participants from participating in the program – *even if they are eligible under the means test.* With the need to record income data on a database, the industry faces having to deal with perceptions surrounding the security or unauthorised use of this information, or simply an unnecessary invasion of privacy. In the end, collection of this data as a requirement for participation in the program could cause potential participants to decline to participate. Such outcomes must be avoided in order for the rebate program to be a success.

3. The effect of the means test on the fledgling solar power industry

Solar power is in a market transformation phase, which can be compared in many ways to as the introduction of efficient air conditioners. When these products entered the market a decade ago, they transformed the way in which people controlled their home climate control habits. In the case of solar however, approximately only half of the costs are incurred in manufacturing. The other half is allocated to installation, which requires extensive experience and efficiency.

Suntech Power Australia is doing its part to reduce overall solar costs, by finding cheaper production efficiencies. We are investing heavily to build additional capacity and working to reduce costs upstream supply costs. We envisage the cost of silicon (a key ingredient in PV panels) to fall sharply by 2012 - to the extent that the cost of PV panels will fall by up to 50%. However, increased production scale is largely contingent on healthy ongoing demand in the community. If the means test has an adverse effect on public demand, it will result in lost installation jobs and the loss of critical installation experience in the sector. Moreover, if vital momentum is lost during these formative years, taxpayers will end up paying twice for the same solar megawatts. This is due to having to once again provide incentives towards solar power, with the additional requirement to once again to re-engage consumers after the market disruptions are over. If Australia wants lower solar power costs in the long-run, it needs to invest wisely. This requires stable, long-term planning in consultation with the local installation sector, whilst fully using other factors such as education.

A major positive benefit of the solar panel rebate is the incentive it creates for members of the public to invest in solar power infrastructure. By paying the remainder of the installation cost, grant recipients are investing in the production of clean power, which when fed back into the power grid benefits the rest of the public. As the total megawatt volume of solar power sold to the grid grows, the more the solar industry can build an “economy of scale” with the wider electricity market. This increase in the critical mass will bring down the overall cost of solar power. For this reason, most solar incentive programs around the world do not require a means test, and the means test will put this trajectory towards grid parity into jeopardy.

The main goal of a rebate scheme for the installation of solar panels should be to encourage investment in the emerging solar industry. There have already been considerable efforts taken to address eligibility requirements for the rebate, and these should not be changed without a compelling reason. For the reasons stated above, we believe the rationale offered by the government lacks a compelling justification.

4. Possible low income earner assistance program

Suntech Power Australia believes that direct assistance is the most appropriate method of assisting low-income families. We are aware of such initiatives in other countries, and would like to highlight an example in the United States.

California has introduced a program called the *Single-Family Low-Income Incentive Program*. The aim of this program is to provide direct assistance to low-income homeowners, enabling them greater access to solar PV systems. The program also aims to help low-income households decrease electricity usage and reduce bills without increasing monthly expenses. The direct incentives are targeted to recipients on a per-watt basis, with the level of assistance dependent on their financial/income situation. The incentives are expected to be available to approximately 5,000 qualifying households. [1]

Recommendation 1: That the government create a separate program, *in addition to the existing rebate*, that helps lower-income residents with their particular needs to 'go solar' while helping to reduce their total energy bills.

5. The need for greater education regarding renewable energy

The needs of genuine lower-income households will differ considerably from that of mainstream residential purchasers, who are helping to transform Australia towards solar power. For example, lower-income households have a greater challenge in financing a system, which in itself is a major disincentive. In addition, there are further issues to take into consideration, such as the structural implications of installing solar power systems on older premises. These include heightened installation and maintenance costs if a roof is old or poorly maintained. Suntech Power Australia believes that further education and awareness is needed in the community.

Recommendation 2: That education and awareness programs regarding energy with targeted incentives is incorporated in the government's ongoing renewable energy policy. We hope this will heighten the interest in and awareness of solar power in the community – especially those on lower incomes.

[1] For more information refer to the following website: http://www.cpuc.ca.gov/PUC/energy/Solar/070424_csilowincome.htm

6. Conclusion

Imposing artificial and arbitrary limits, by way of a means test on solar panel sales and installations is not the answer. The means test will only slow down the goal of the rebate — to further develop clean energy and assist solar power to reach grid parity.

The means test is contrary to this goal and the net result will be a negative impact on the community's investment into solar power, and is contradictory to the government's commitment to renewable energy as a major element in the fight against climate change.

Suntech Power fully supports proposals to bring solar to low-income households, but via a different avenue than a means test. All residential and business dwellings, regardless of the income, should be encouraged to invest in clean, green renewable energy.

Recommendation 1: That the government create a separate program, *in addition to the existing rebate*, that helps lower-income residents with their particular needs to 'go solar' while helping to reduce their total energy bills.

Suntech Power Australia believes that further education and awareness is needed in the community, as the needs of genuine lower-income households will differ considerably from that of mainstream residential purchasers.

Recommendation 2: That education and awareness programs regarding energy with targeted incentives is incorporated in the government's ongoing renewable energy policy. We hope this will heighten the interest in and awareness of solar power in the community – especially those on lower incomes.

Please see the attached appendix for a profile of Suntech and Dr. Shi Zhengrong

Suntech Power Australia – 21 July 2008

Briefing: Photovoltaics, Suntech and Dr Shi

1. Purpose

The purpose of this brief is to provide a biographical brief on Dr. Shi Zhengrong and an overview of his company, Suntech Power Co. Ltd.

Photovoltaics (PV): The basics

A single PV cell consists of two or more thin layers of semi-conducting material, most commonly crystalline silicon. When the silicon is exposed to light, small electrical charges are generated and conducted away by metal contacts as direct current (DC).

In order to maximise energy collection and conversion, single cells are connected together and housed in a module. These modules are the building blocks of PV systems and are, in turn, connected together to generate usable volumes of electricity. In some instances, an inverter is also used to convert low voltage DC into higher voltage AC power.

2. Dr Shi Zhengrong Profile

- Founder / CEO / Chairman of Suntech.

Experience

- **9th September 2001**: Founded Suntech Power Holdings Co. Ltd.
- **1995 to 2001**: Research director and executive director of Pacific Solar Pty. Ltd., an Australian PV company engaged in the commercialization of next-generation thin film technology.
- **1992 to 1995**: Senior research scientist and the leader of the Thin Film Solar Cells Research Group in the Centre of Excellence for Photovoltaic Engineering at the University of New South Wales.
- **Education**: BA in optical science from Jilin University in China in 1983; Masters in laser physics from the Shanghai Institute of Optics and Fine Mechanics, the Chinese Academy of Sciences in 1986; and a Ph.D in electrical engineering from the University of New South Wales in 1992.

Personal Accolades

- Chosen as “50 people who could save the planet” by British Journal “the Guardian”
- Chosen as one of 9 people in China’s 2007 Green people of the year
- July 2008: Named the Winner of the Banksia International Award
- October 2007: Named one of TIME magazine's 2007 "Heroes of the Environment”
- February 2007: Named as “2006 CCTV top 10 economic figure of the year” for his contribution to the renewable energy industry in China.
- August 2006: Appointed as member of advisory board of NYSE.
- May 2006: Awarded the “Best Entrepreneur Prize” by the Southern California Asian Society.
- 2006: Forbes magazine rated Dr Shi the richest person in mainland China, the fourth-richest Australian.
- December 2005: Awarded "Wuxi's Pioneer of Innovation" and "Wuxi's Key Person of Economy for 2005”.
- October 2005: Awarded “PV-SEC Prize” at International Photovoltaic Science and Engineering Conference.
- Inventor of 11 patents in PV technologies.

3. Suntech Power

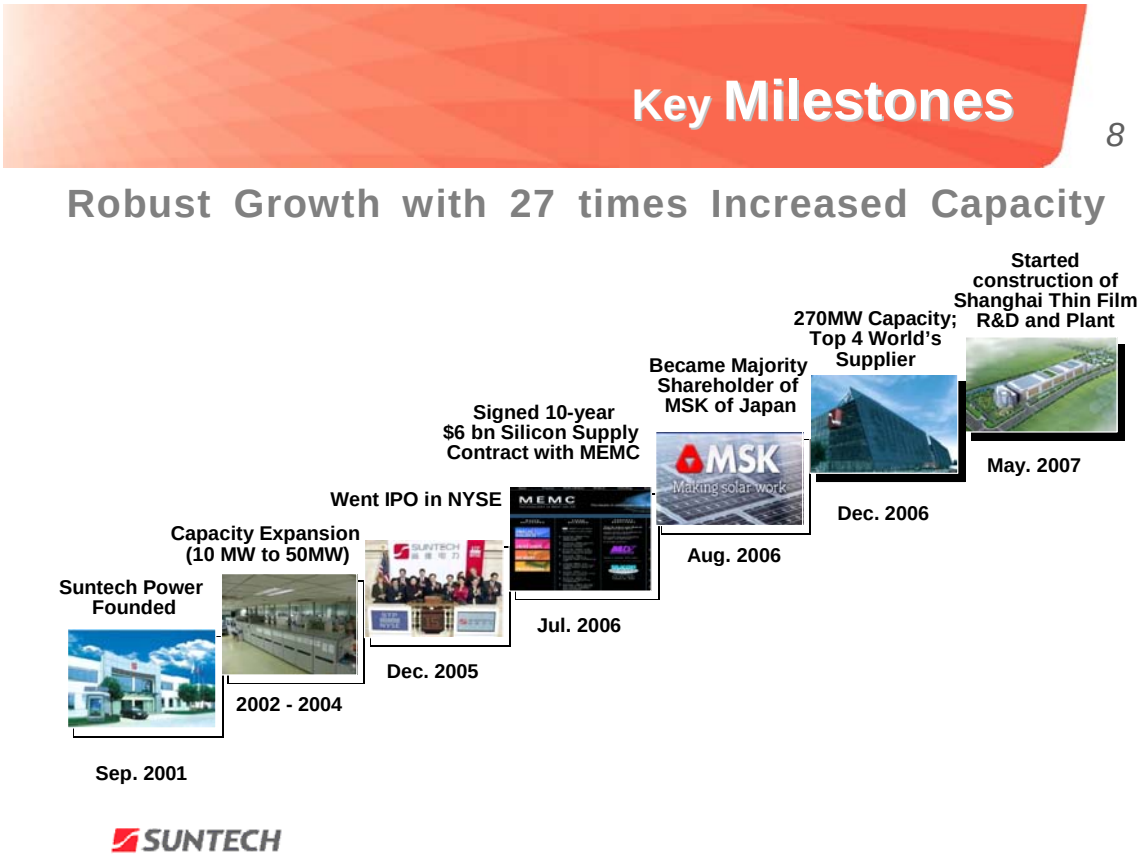
History

- January 2001: Established Wuxi Suntech Power Co., Ltd. and commenced business operations in May 2002.
- August 2005: Suntech Power Holdings Co., Ltd., or Suntech, was incorporated.
- December 2005: Listed on NYSE, at $15 per share.
- July 2006: Signed a 10-year material contract with MEMC worth $6 billion USD - ensures Suntech's material supply for the next 10 years.
- August 2006: Announced agreement to acquire MSK Corporation, a leading PV module manufacturer and Building-Integrated PV (BIPV) company in Japan.
- August 2006: Suntech America Inc. founded (US subsidiary); Suntech Shanghai Branch founded.
- January 2007: Suntech Europe established to expand customer base in EMIA regions.

- May 2007: Announces plans to construct a thin film R&D and manufacturing facility in Shanghai with target operation in late 2008.
- June 2007: Signed a 10-year $678 million polysilicon supply contract with Hoku Materials (wholly owned subsidiary of Hoku Scientific, Inc. established to manufacture polysilicon for the solar market).
- October 2007: Enters into 7-year, $1.5 billion polysilicon supply contract with Asia Silicon.
- November 2007: Enters into 7-year polysilicon supply contract with Nitol Solar.
- February 2008: Announces 364MW full year 2007 solar shipments, 540MW of installed PV cell capacity and achieves revenues of $1.3 billion for full year 2007. Suntech becomes largest producer of PV modules worldwide and third largest producer of PV cells.
- February 2008: Opens sales offices in Germany, Spain and South Korea.
- February 2008: Invests $20 million in Hoku Materials to strengthen partnership and support polysilicon plant development.
- February 2008: Suntech completes $575 million convertible bond offering to finance procurement of upstream silicon supplies, production capacity expansion and new technology commercialization
- March 2008: Suntech invests $100 million in Nitol Solar to strengthen partnership and support polysilicon plant development.
- **April 2008: Suntech Receives Frost & Sullivan 2008 Solar Energy Development Company of the Year Award**
- **June 2008: Suntech and WACKER SCHOTT Sign 220MW Silicon Wafer Supply Agreement**

Overview

- Suntech is one of the leading solar energy companies in the world designing, developing, manufacturing and marketing a variety of PV cells and modules.



Stock price: US$49 (as at 9 April 2008, from $15 on 14 December 2005 – a growth rate of 227%).

- Market capitalisation: US$7.6 billion as at 9 April 2008.
- Solar technology provider for the 2008 Beijing Olympics.
- **Vision**: Suntech is passionately committed to delivering alternative energy choices through lasting partnerships in order to build a brighter, sustainable future:
  - ‘Energy should be affordable for everyone.’
  - ‘Reduce the dependency on fossil energy and benefit the whole world.’

- **Mission**: At the forefront of addressing tomorrow's energy needs today, Suntech combines pioneering solar technology with nature's most abundant resource to deliver the cleanest, most affordable and energy efficient solutions for a green future.
- Suntech's headquarters are in Wuxi, China. Website: http://www.suntech-power.com

Activities, Products and Projects

- **Activities include**:
  - Research and Development**.**
    Focusing on both commercializing new PV technology and improving the manufacturing process;
    Developing of Thin Film Silicon PV Cell Technologies;
    Improving Encapsulation Technologies extending module life;
    Improving module power output.
  - High quality manufacturing of PV cells and modules utilising Suntech's own design capabilities.
  - Largest solar module provider worldwide
  - Plans to increase production capacity to 1GW by 2008.

A diagram of the PV supply chain, highlighting where Suntech operates (solar cells and modules)

- **Current Projects:**
  - PV system for the Beijing 'Bird's Nest' 2008 Olympic Stadium
  - 23.2MW on-grid solar park for Atersa in Spain
  - 450KW PV system for San Francisco Airport - Terminal 3
  - 300KW on-grid roof top PV system in Jiangsu Province, China
  - 1MW on-grid BIPV System for Suntech's new R&D Centre in Wuxi, China
  - 800KW on-grid BIPV System for Wuxi New Airport, China
  - 38KW Pecsos Park recreational centre- Phoenix (Arizona)

4. Suntech Power Australia

- Suntech Power Australia Pty Ltd was recently established to deliver a wide range of solar energy solutions to the Australian market. Suntech is exploring potential initiatives to establish research and development facilities and/or manufacturing facilities in Australia in the long term.

- Website: http://www.suntech-power.com