

This is not a report reviewing how a company performed in the past.

It is a blueprint of how we will live in the future.

This is not a review of realities. This is not a critique of the world as it is. But an insight into a But a preview into possibilities. tomorrow that can be.



At Webel-SL Energy Systems, we are not just a company manufacturing solar photo voltaic cells.

We are an earth crusader driven by the zeal to make the world a better place to live in.

Origin

- Webel-SL Energy was created as a threeway joint venture of the S. L. Agarwal Group, Webel and Helios Technology of Italy in 1995.
- It commenced operations in 1995-96 with an installed capacity of 1 MW but grew to 10 MW in 2007-08.
- It is publicly held and listed on the Bombay Stock Exchange and the National Stock Exchange; market capitalisation was Rs.193.34 cr as on 31 March 2008.

Technology

- Webel-SL is India's second-largest manufacturer of solar photovoltaic cells and modules, using mono-crystalline silicon wafers, for standalone and grid-connected projects.
- It successfully graduated to solar grade technology after mastering the reclaimed technology.
- It absorbed the solar-grade technology rapidly from its foreign collaborator and emerged technologically independent.
- It tied up with Centrotherm Photovoltaics, the number one global provider of technology and services, to commission its 30-MW expansion.

Capacity

- Webel-SL's manufacturing plant in Kolkata possesses an installed capacity of 10 MW; its proposed expansions (at existing and new site) will raise capacity to 40 MW.
- Its modules are suitable for gridconnected and standalone power plants of high performance and reliability.
- It markets products under the Webel Solar brand, completely owned by the Company, around a globally compelling price-value proposition.

Presence

- Webel-SL increased its presence from nine countries in 2000-01 to 17 countries in 2007-08 (including Australia, Germany, Spain, France, the US, Kenya, New Zealand, Indonesia, the Philippines, Sri Lanka, Malaysia, Hong Kong, China, Botswana, Korea and Singapore).
- More than 95% of the turnover was derived out of global (non-Indian) sales.
- It enjoyed an ongoing order book of six to nine months at all times over the last three years.

ertification

- UL 1703 Standards, USA, for its entire range of products.
- CSA mark for W1750 and W2100.
- IEC certification for its new modules W2100 and W1750.
- ISO 9000:2000 from the UL Registered Firm.
- PV GAP certification, one of only five Indian companies to receive it.
- Fraunhoffer certification (all modules are calibrated at the Fraunhoffer Institute, Germany).

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1995-97

- Production commenced with technical support from an Italian company.
- Processed five inch wafers.
- Installed capacity started with 1 MW.



1998-99

- Production evolved six inch wafers and modules up to 90 Wp for type W900.
- Received quality certification from JRC-ISPRA IEC 61215 standards.

2000-01

- Production extended to eight inch wafers.
- Module capacity increased to 120 Wp for type W1000.
- Installed capacity increased to 3 MW.

2002

- The JRC-ISPRA IEC 61215 standard certificate was obtained for all W1000 modules.
- UL 1703 listing was obtained for all W900 type modules.



2003

- Installed capacity increased from 3 MW to 5 MW.
- UL 1703 listing obtained for W1000 type modules.
- Commenced production of 160-190 Wp modules.

2004

- Initiated commercial production of W1600.
- Commenced research and development of new products.

2005

• Introduced three new products including the W2000R.



2006

- Expansion of installed capacity from 5 MW to 10 MW.
- Received JRC-ISPRA IEC 61215 standard certification as well as UL certification for all products.

2007

- Turnover crossed Rs. 100 cr.
- After mastering the art of making solar wafers from the reclaimed technology, the Company graduated to the use of solar-grade wafers.
- Strengthened product portfolio through the addition of new wattage modules from 175 Wp to 220 Wp.
- Embarked on capacity expansion from 10 MW to 100 MW in various phases.



2008

Proposed commissioning of the state-of-the-art PECVD technology.



Forget today. This is tomorrow.

The roof on the building becomes a revenue generator. Desert real estate prices quadruple. Rajasthan becomes a net surplus power state. Pensioners invest in secured solar energy returns. Fifty per cent of all cars have solar panels fitted on their roof. A new specialised breed of real estate agent specialises in renting and leasing rooftops. Solar cars are noiseless and smokeless. Rural solar 1 MW co-operative model established, marketing power for captive use against a fee. Technologists develop software to 'zip' energy modules so that eight hour charges can be compressed in 15 minutes. Global solar energy trading equals trading on the NYSE. 'Rent a solar unit' module graduates beyond the 'SME' tag. Middle East turns down the oil tap and turns on its solar energy muscle. Rural India becomes a 'net exporter' of solar power to urban India. Solar boom creates three new cities in the Sahara. Cars drive into the 'solar station' for a quick 'charge'. Hafeez Contractor develops a new building façade with concealed solar cells. Estimated 2,00,000 rural solar entrepreneurs in India. The world's solar laptop promises unlimited battery life. G8 resolves that all new urban construction must have 50% of its utilities supported by solar energy. India's rural poverty declines following a growing incidence of solar farms. The brain behind India's rural solar farm model wins the Nobel Prize for poverty eradication. Cutting-edge technology makes solar panels 'break-proof'. Municipal corporations turn pavements into tiled solar modules where people can walk on. New-age apartments running entirely on solar energy generate a premium on allotment. Solar energy-linked fixed deposits are floated. Most cities in the world are classified as 'smoke-free'. Canny real estate promoters market 'zero maintenance cost' homes around solar energy.

Webel today. 10 MW.

Webel tomorrow.

Webel thereafter. 100 MW.



Managing Director's overview

"At Webel-SL, we are strengthening our position as the largest exportoriented PV cell manufacturer out of India."

In a number of ways, this is an inflection point in our existence.

Consider this: Oil was USD 102 per barrel until February 2008, strengthening to USD 145 per barrel in the following five months; thermal coal was USD 55 per tonne until 2007, but increased to USD 125 per tonne in the following 12 months.

It is an irony but had this increase in energy feedstock costs not taken place, the global renewable industry – of which solar energy is an integral part – would have continued to maintain its usual growth, prioritised by governments through lip service but not necessarily filtering down to any significant way in which products are being consumed and lives are being led.

This oil shock has suddenly brought the subject of renewables at the forefront of our consciousness. I get calls from various common people — like you and me — with diverse requests: can we buy an electric car and recharge through the solar route? Is there any way we can transform our entire house to renewable energy? What would be the payback of residential water heaters charged through solar cells?

A number of people might consider these questions to be commonplace. I do not. Having been engaged in the manufacture of solar photovoltaic cells for more than a decade, we conducted our business on the periphery of public recall; people who got to know what we were doing would only acknowledge our

presence and infer that our products would be relevant only for the really affluent in the developed world. The fact that Indian consumers are even contemplating a switch from conventional to renewable means indicates that the subject has touched an inflection point in our mindset.

What is heartening is that this inflection point is beginning to be reflected in policy and order ticket size. Bengal became the first state to announce a semiconductor policy with a provision of Rs. 15 per unit for feed-in power tariffs. When you compare this with the fact that feed-in power tariff for conventional energy is a fifth of this rate, it will be easy to recognise why a number of companies have announced significant plans to commission solar energy plants and farms within the state and how the industry has probably arrived at a critical point, translating into a significant increase in capacity, visibility and acceptability.

At Webel Solar, we are at the right place at the right time. We grew incrementally from 1 MW in the year we went into existence, adding one MW or two every few years out of internal accruals and debt. From 2008-09 onwards, we will transform our industry presence through an increase in our solar photovoltaic cell capacity from 10 MW to 40 MW (first phase) to 100 MW (second phase).

This business model will facilitate scale on the one

hand and cost reduction on the other. This will transform our Company from a small solar cell manufacturer into a dynamic proxy of the industry.

Global industry estimates project 50% year-on-year growth for solar energy, although it is not even 1% of the world's energy source today.

At Webel Solar, we recognise that we are in business to enhance value for shareholders. It would be pertinent to remind readers that we grew out of accruals and debt for more than a decade, enhancing value for our owners; it is only in 2007-08 that we mobilised net worth through external means, right-sizing our balance sheet for embarking on projects of commensurate magnitude, investment and potential, without exceedingly diluting our equity capital. As a result, an equity structure of 10 million shares of Rs. 10 each for supporting a 40-MW project represents an excellent foundation for sustainable momentum in shareholder value.

This is how we expect to incrementally enhance sustainable value into a larger value-creation engine — the scale in the first phase of our expansion will generate a sizable surplus that will be immediately reinvested in low-cost capacity creation in the second phase, starting a virtuous cycle of growth and prosperity.

Manda

S. L. Agarwal

Managing Director

Five minutes with the management: An overview of our ongoing expansion programme

Timely. Necessary. Cost-effective. Three ways in which we can describe our decision to expand from 10 MW to 40 MW in 2008-09



How would you review the performance of the Company during the last financial year?

The numbers that we reported during the last financial year – a 5.76% de-growth in revenues and a 37.34% de-growth in the bottom line – might disappoint when one considers the attractive growth of the industry. The Company could have performed better but for the sharp increase in raw material cost, that necessitated a switch in our technology in the last quarter and the write-offs required to make for certifications, which will reflect in our performance in 2008-09 and beyond.

However, our biggest achievement during the year under review was that we embarked on structural organisational readjustments to sustain our robust growth over the coming years.

What structural initiatives did the Company embark upon during the year under review?

In 14 years of our existence, we grew patiently but surely, from an installed capacity of 1 MW to 10 MW. In 2007-08, we announced our big audacious goal: we announced the first phase of linear growth (in

photovoltaic capacity) from 10 MW to 40 MW and the second phase of expansion from 40 MW to 100 MW by 2010.

What were the other major initiatives that resulted from this enunciation?

It took us five years to enhance our net worth from Rs. 6.71 cr to Rs. 21.62 cr as on 31 March 2007. In the following 12 months we more than quadrupled our net worth to Rs. 87.04 cr, partly through the ploughback of our earnings and partly through funds mobilisation, creating the foundation of our gearing that will enable us to mobilise debt, accelerating the growth in our installed capacity. This mobilisation of funds was necessary and timely; it put all our plans into a virtuous cycle. We acquired land, commissioned construction, placed orders of production equipment, secured raw materials and opened letters of credit. The result of this structural correction was that our aggressive capacity expansion is well on its way to becoming a reality during 2008-09.

What were the other highlights to have transpired during 2007-08?

I will list some of the highlights of our various initiatives in 2007-08, the benefits of which will start reflecting in our financials only from 2008-09 onwards. These comprise the following:

• In a challenging raw material environment – the prices of reclaimed polysilicon increased sharply as availability declined – we secured adequate raw materials not only for our existing needs, but also for our proposed expansion to 40 MW and 100 MW. As a result, we can state unambiguously that we covered ourselves for raw material – price and volume – adequately for all our production requirements for the next two years. This will derisk the Company from production downtime at a time when it is embarking on the biggest expansion in its existence.

- We also developed 180 and 220 wattage products towards the latter part of the financial year. Their corresponding certifications were completed during 2008-09 and the benefits of both – development and certification – will be reflected in our numbers from 2008-09 onwards.
- We invested in significant manpower recruitment technical and managerial – keeping our capacity expansions in mind. These were made towards the last quarter of 2007-08, the benefits of which will reflect in our financials once the capacity expansion goes onstream.

Shareholders are apprehensive that the Company's expansions are significant when compared with its erstwhile capacity. Were these capacity expansions at all necessary, in terms of scale and succession?

The expansions were necessary from a number of

• The manufacture of solar photovoltaic cells is rapidly moving towards scale – manufacturers are setting up bigger and bigger capacities, enhancing their ability to bring down costs and in turn their prices, increasing their competitiveness with alternative forms of power generation.

perspectives:

- In an environment where the availability of polysilicon is becoming increasingly challenging, we are convinced that it will still be relatively easy for the large PV manufacturers to negotiate for adequate quantities and the right prices over relatively small manufacturers.
- Over the years, we acquired the technology to make periodic low-cost capacity increases through internal accruals and debt. In doing so, we reached the knowledge critical mass that was more than commensurate with our installed capacity of 10 MW.
 We recognised that we possessed the intellectual

wherewithal to scale our business aggressively and create a foundation for large and sustainable growth thereafter.

In view of these realities, it became imperative to grow and do so fast. If we had not done so, our ability to enhance value for shareholders in an attractive way would have been irrevocably affected over the months to come.

The Company's capital employed in the business was Rs. 54.24 as on 31 March 2007, whereas the 30 MW expansion entails a project outlay of Rs. 186 cr. Will the Company be able to fund this large project without compromising its ability to service and repay debt?

This is perfectly a logical question for shareholders to ask. The following reasons will allay the fears of shareholders on the financial robustness of the project and our ability to protect shareholder interests:

- The Rs.186-cr project cost has already achieved financial closure, eliminating apprehensions of implementation delays from a dearth of necessary funds.
- The financial closure was achieved through a prudent mix of accruals, fresh net worth infusion, promoters' contribution, GDR offering and an FCCB issue; while all the financial means will address capex, the FCCB issue was made to fund the raw material advance that we were required to make.
- The term loan was tied up with Axis Bank, ICICI Bank and Exim Bank; the working capital component was negotiated with Standard Chartered Bank and ICICI Bank.
- The average cost of the Company's debt was 6.36% with an average tenure of 6.17 years, which represents a balance between tenure stability and economic viability.

• Following complete fund mobilisation, the Company will have a debt-equity ratio of 1.52, which is reasonable when you take into account that we have a standing order book for a year-and-a-half, and that all our raw material supplies and costs have been secured.

The Company had demonstrated project viability across 10 MW with reclaimed raw material. Will the project to manufacture an additional 30 MW with solar-grade raw material be equally viable?

At Webel Solar, we are convinced that given the prevailing dynamics – assured demand for a year-and-a-half and completely negotiated raw material – we are optimistic that a 40-MW organisation will be more profitable (margin terms) than a 10-MW company for the following reasons:

- We are moving from a combination of manualautomated technology to fully automated technology.
- We are moving from the challenging use of reclaimed technology to impart uniformity to solar-grade raw material, which will enhance our process efficiency.
- We expect to leverage economies of scale arising from the increased capacity.
- We will enhance our access to bigger orders on the one hand and strengthen our ability to acquire raw materials in a bigger way at a lower cost, thanks to our scale.

What does the Company need to do to make this a reality?

The biggest priority facing the Company is timely commissioning and scale-up. This is what we have done over the last year in this direction:

• We are commissioning this project on six acres in Falta SEZ, on the outskirts of Kolkata; the land has been acquired and work has started in full swing.

- We have already engaged dependable contractors and the casting had been completed in July.
- We have ordered all our equipment, which is being delivered in a phased manner as per onsite requirement.
- We have allocated a turnkey responsibility to Centrotherm (Germany), a renowned manufacturer of PV industry equipment with a performance guarantee to achieve rated utilisation within six months of commissioning.

At Webel Solar, we recognise the importance of scheduled commissioning (December-January 2008-09) on the one hand, and the ramp-up to rated utilisation in the shortest time. We are confident that we can achieve both, leading to considerably improved prospects from 2009-10 onwards.

How will this translate into numbers for the Company?

According to the ongoing industry realisation level, we expect to generate lucrative revenues over the coming years (even if we assume a small increase in production from the expansion in the last quarter). In the following years, we expect to capitalise on increased revenues from the next phase of expansion (40 MW to 100 MW, funded out of accruals) and also reduce costs in a significant way, following the proposed commissioning of our PECVD project. So at Webel Solar, we see ourselves at the cusp of an aggressive growth opportunity starting from the last quarter of 2008-09.

What is your message to shareholders?

When we went into business in the mid-nineties, the concept of solar energy was accepted but industry visibility and acceptability were still far off. The increase in the cost of oil and coal in recent years has enhanced the relevance of solar energy as a universaly renewable energy alternative.

The industry is attractively positioned for the following reasons:

- More governments across the world have extended from mere lip service to actually rolling out orders for the enhanced proposition of renewable energy in their overall energy mix.
- Bengal announced a landmark feed-in power tariff of Rs. 15 per unit, which will inspire other Indian states to follow suit so that solar energy becomes a national priority. The first signs of this are becoming visible; what used to be project orders of 250 kilowatts or less even as recently as a couple of years ago, are now being scaled to orders for 2 MW or more.
- The success of wind energy in India has established the concept of feed-in tariff for the confidence of solar players, as a result of which we see a faster rise in the implementation of solar power projects (upstream and downstream) in India.
- Despite its aggressive growth in recent years, solar energy still accounts for less than 1% of the overall global energy mix, which holds out an optimism of sustainable growth over the coming years following significant penetration.
- There is a greater realisation of the need among downstream users (industrial and commercial) to freeze their cost structure today as the first step towards arriving at a predictability in financial budgeting, something that solar energy will easily facilitate as it has no recurring costs after the initial capex.
- In Europe we are seeing the incidence of solar farms, where large capacities are created by a group of users, resulting in large capex and large wattages, serving diverse downstream needs.
- Growing solar-energy applications are enhancing industry optimism year after year.

Interview with the Director - Technical & Marketing



Larger output.
Higher efficiency.
Stronger viability.
This is our
agenda following
the 30-MW
expansion in
2008-09.

Mrs. S. Vasanthi reviews and previews the Company's technology moorings.

How would you review the Company's performance during 2007-08?

We were unable to achieve our production targets for the year, following the need to graduate from the use of reclaimed silicon during the last quarter of 2007-08. Prior to the switch, we produced 6,000-7,000 eightinch round wafers with an average of 4-4.2 watts per wafer. Thereafter, we moved to five-inch square wafers with 2.5 watts per wafer, which necessitated a larger amount of processing to achieve the desired output.

How did the Company tide over this challenging technology switch?

We switched from the use of reclaimed to solar-grade raw material, invoking the contract entered into in June 2007 with an eye to continuous supply after our 30-MW expansion. As it turned out, we preponed delivery schedules and fortuitously plugged the temporary raw material gap. The switch was not easy for various reasons: we had to move from a wafer thickness of 600 microns to 200 microns, which made material management increasingly difficult; the reclaimed material, used in the semiconductor industry, was manufactured more meticulously with a higher purity percentage; so we had to tweak operating parameters to accommodate the change in raw material quality.

How did the Company fare in the circumstances?

We performed creditably despite the fact that we had never worked with solar-grade material before. Following a brief stabilisation period, we reported a decline in breakages and rejections to a level below what we had normally achieved with reclaimed raw material. Once we stabilised output in April 2008, we generated a more uniform product quality. Thereafter, we gradually ramped up our production using solar-grade material. I am optimistic that we will make nominal investments in capital expenditure and scale volumes to 1 MW a month by the end of the first half of 2008-09.

How did the Company perform on the efficiency front?

When we discontinued production using reclaimed silicon without the PECVD process, we were at an efficiency level of 14%, comparable with the best global standards with that raw material. It is an index of our Company's technological capability that the raw material switch enhanced our efficiency to 16-17%, in line with the best global standards using the new raw material. We reported some other improvements as well: we enhanced our yield from 85% (using reclaimed technology) to 94% (using solar-grade material) with a corresponding decline in breakages and rejections. We also reported a superior look, uniform colour of wafers and a better-looking junction box, which enhanced customer confidence.

What are some of the industry challenges and how is the Company addressing them?

The primary challenge facing the industry is raw material availability, but we are adequately covered through the steady supply of solar-grade raw material. The other interesting development is the increase in real estate costs. This is empowering a number of our customers to demand higher wattage cells, enabling them to occupy a lower space and save on real estate costs. As a result, what used to be a peak industry

standard of 150 watts a few years ago is now around 220 watts - some Japanese manufacturers have extended to 300 watts through a different technology altogether - making it imperative for manufacturers like us to graduate to higher wattages. One interesting statistic bears out the evolution: more than 90% of the demand in the solar photovoltaic industry is weighted towards modules of 190 watts and higher. At Webel Solar, we responded to this industry reality through the proactive development of higher wattage cells; our previous peak product was 160 watts, but in 2007-08 we developed 180 watt and 220 watt products with corresponding certifications. This emphasises an important point - we work on a rapidly changing cutting-edge technology and reinforce this development through business-strengthening international certifications.

The total solar radiation hitting the planet

is about 1,000 times the world's commercial

energy use. Nearly 3,850 zeta-joule (ZJ) of solar energy are available every year.

What does the Company expect to achieve from a production perspective in 2008-09?

We produced 5.86 MW in 2007-08, suffering largely from production downtime in the last quarter. We now expect to do significantly better. Centrotherm Photovoltaics has been entrusted the turnkey responsibility of commissioning our expansion and accelerating the scale-up. The expansion will be completely automated with a clean room of the kind that is now a standard in some of the most demanding global markets. Given Centrotherm's rich expertise and the number of successful global installations, we are optimistic that our expansion will translate into a significant increase in production in 2008-09 at a 17% efficiency and 95% yield, enhancing value for the Company and its shareholders.

At Webel-SL, we dream with our eyes open. This is the result.

At any given point of time, the earth's upper atmosphere receives 174 petawatts of incoming solar radiation (insolation). About 6% of the insolation is reflected and 16% is absorbed when it enters the atmosphere.





Post-balance sheet developments

(performance in the first quarter, 2008-09)

- 5.23% increase in total income to Rs. 2,699.52 lacs in the first quarter of 2008-09 from Rs. 2,565.29 lacs in the first quarter of 2007-08.
- 35.82% surge in net profit to Rs. 308.21 lacs compared with Rs. 226.93 lacs in the first quarter of 2007-08.
- 45.16% increase in EBIDTA to Rs. 554.34 lacs from Rs. 381.88 lacs in the first quarter of 2007-08.
- 299-basis point increase in net profit margin to 11.84% in the first quarter of 2008-09 from 8.85% in the corresponding quarter of 2007-08.

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