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# India's Anti-dumping Duty on Solar Panels: Protectionism to Save Intermediaries or Recipe to Kill A Nascent, Sunrise Industry?

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#### Abstract

Due to widespread discussion of global warming, fluctuation and volatility of oil price and compulsions of energy security almost every country is looking at green and clean technologies. Sustainable energy resources are gaining attention. Among other options, Solar has made remarkable progress technologically as well as commercially. The paper discusses the progress on the learning curve, and the plethora of issues that are being thrown up especially protection of home grown industry is one important debate. The sagacity of protecting some section of the industry or protecting the consumer and the global trade in a borderless world are issues to ponder over and an informed decision to be taken after consider all aspects holistically taking a long term perspective. The paper discusses the negative impacts of the immediate returns only perspective taken by imposing Anti Dumping Duty on Solar Panels and proposed a broad based long term collaborative perspective which would favour the end customer and the Indian solar panel industry per se.

**Key words:** Protection, Anti Dumping Duty, Counter Vailing Duty, World Trade Organisation, Solar Photovoltaics, Indian Solar Panel Industry.

#### 1. INTRODUCTION

Solar energy is not the top renewable energy resource yet, but it is getting there. It has been a game changer and caused quite a few paradigms shift. Age old and firmly retrenched fossil fuels and along with it, the established cozy arrangements are getting disturbed and challenged. Politics of trade is causing skirmishes. The solar energy has the highest global warming mitigation potential amongst available clean energy resources and at present around 3 % of global energy consumption comes from solar (Jena & Jena, 2014), however, increasing energy efficiency route is a more economical solution for mitigation.

Approx 35 % Indian population is beyond the reach of electricity (Mukerjee & Khaprade, 2009). Worse, it would be unviable to provide grid electricity to this lot as most of the rural population is unviable to

service. The last mile connectivity in India, be it telecom, banking or electricity, is prohibitively expensive and a logistical nightmare. From carbon emission standpoint, though on per capita basis, India fares pretty low, still it is the fourth highest green house gas emitter and accounts for 5 % of total fossil fuel emission worldwide, 57% of GHG (green house gases) emission is contributed by electricity & heat sector (WRI, 2009). To bridge the gap, to mitigate and shift focus from fossil fuel to less polluting energy resources and to provide electricity to have-nots, Government. of India(GoI) has envisaged 22 GW (Giga Watt) by 2022 (20 GW grid connected and 2 off grid) solar power, among other renewable resources, as part of National Solar Mission (NSM), 2009.

Globally US, Germany, Japan etc pioneered solar energy manufacturing but Chinese took over and

by 2011 became number 1 player for back to back 2 years. In 2011, 6 out of top 10 solar manufacturers were Chinese and their global market share shot up to 57% (Lewis, 2012). Naturally, this has generated a lot of heartburn not to talk of loss of market shares, dollars and Euros among the losers from developed countries. They did gang together through Anti Dumping Duty (ADD), Counter Vailing Duty (CVD), however, still the status quo persist and the propensity to file another "material injury" case continues. 2007 onwards, China took a quantum jump over US, Germany and Japan and took lead over all others. That trend more or less continues.

To make solar energy tariff higher by making the input costs - PV (photovoltaic) panels higher, by keeping low cost foreign competition out, through protectionist measures like ADD, CVD etc is a double jeopardy, particularly for common public who are already sandwiched between low growth, if not no growth and massive scams and non beneficial for the country itself.

#### 2. REVIEW OF LITERATURE

Over last 15 years the solar energy as a sector has become a \$ 90 billion industry (Lewis, 2012). China has captured numero uno position and caused much of trade conflicts. The same read in the light of the fact that 5 % Indian population is beyond the reach of electricity (Mukerjee & Khaprade, 2009) increases the intensity of the issue. Also interesting is reading it with the fact that India is the fourth highest green house gas emitter and accounts for 5 % of total fossil fuel emission worldwide, 57% of GHG (green house gases) emission is contributed by electricity & heat sector (WRI, 2009). All this leads to the single indicator which is going Solar, particularly for a country like India is its employment potential, that is being highest among renewable options. 25-40 direct jobs per MW (10 in production, 33 in installation, 3-4 in system wholesaling, 1-2 in research), (Hariss-White et al 2009), provided of course, projects actually get off the ground and not are stillborn due to land acquisition, ADD/CVD cases, politico – strategic drift and such other nuisances and deal breakers.

As per CEA (Central Electricity Authority), by 2020, total renewable would contribute 3.53% of electricity generation (Wheeler & Shome, 2010). By 2032, as per IEPR (Integrated Energy Policy Report, Planning Commission of India), total renewable energy may contribute 11-13 %. As per the IPER projection, Solar would contribute 27.32% out of the total renewable bouquet of energy options. By 2031-2, solar energy could potentially meet 95% of India's energy needs (Harriss-White et al 2009). But, detailing and fact finding exposes not only the gaps between the lofty policy making and poor implementation but also the loopholes in policy itself. Going by the milestones achieved or rather not achieved so far, this grand scheme NSM is also heading for massive cost and time overrun. In absence of prorata and intermediate milestones achievement, overnight 22 GW would not materialize out of thin air. As of 2010, the cost estimate was Rs 90,000 Crores. (Deshmukh et al 2010).

For the purpose of study we also quote that the first reported initiative of ADD case was in 2009, German PV manufacturers Solar World & Conergy, ganged up to bring some punitive measures on Chinese through EU, however EU chose not to press charges then, they did in 2012. Germans in 2009 alleged that China's Golden Sun and Solar Rooftop programs influence module cost favorably for Chinese and puts others in commercially disadvantageous position. In 2010 Japan initiated WTO consultation against Canada over FIT (Feed In Tarriff) and US filed cases against China (Lewis 2012). US' cases were filed under Section 301 of Trade Act, 1974. (Liu, 2013).

These cases did not have as much bite as bark and offending parties got away lightly citing one or other loophole or removed subsidy once the effect of supporting indigenous industry was over. By Jan 2012, Obama government started acting hawkish, set up Trade Enforcement Unit to speed up investigations of so called trade related infringements, however, industry was divided and having second thoughts due to its commercial interests being compromised. Coalition of Affordable Solar Energy (CASE) were not looking at these issues from the same perspective as CASM

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(Coalition of American Solar Manufacturing). CASE produced facts and figures citing some 60,000 job loss and loss suffered by consumers etc, CASM hit back with their side of the story on material injury, however, all these self contradictions, did reduce the sting of many investigations, Chinese clawed back and won some part reprieve on proving that ADD and CVD simultaneously is not legally tenable. In an earlier skirmish, Mar 2011, WTO ruling and Sept 2011 US domestic Court declared that imposing ADD as well as CVD was "inconsistent" with WTO rules, US court declared Dept of Commerce action "illegal" as per US Countervailing law. WTO laws on dumping and anti dumping are in Article VI of GATT 1994 (ADA). However, US Congress, overturned the US Court verdict, passing HR 4150, continuing to apply CVD on subsidized goods (He, 2012). In retaliation, Chinese Ministry of Commerce started an investigation against a US polysillicon supplier, US- China trade war in Solar Energy sector is on since then (Liu 2013).

From an Indian perspective on subsidy, (Deshmukh et al 2010, Khaprade 2007), showed that for more than 33 kV utility grid, less than 33 kV grid, off grid (30-90 % capital subsidy), solar lighting systems and SIPS (Special Incentive Package Systems - 20-25 % capital subsidy for PV manufacturers) total subsidy worked out to be Rs 36,000 Crores (NPV at 10%). This subsidized Solar electricity further on the crutches provided by CERC (Central Electricity Regulatory Commission) at set feed in tariff of Rs 15.3 and Rs 17.9 for solar thermal and solar PV for 25 yrs. Out of all above, only grid connected 1100 MW entails Rs 21000 Crores (NPV @ 10 %), i e, Rs 21 Crores / MW subsidy. There is excise and custom duty exemption for certain capital equipments, material and components. MNRE's migration scheme for promoters to generate additional profit (at customers' expense) by realizing higher tariff of CERC and still having a committed buyer as NVVN (an NTPC entity). MNRE has been instrumental to extend subsidies to renewable including solar in the form of budgetary support for research, development & demonstration project incentives for financial institutions to invest in renewables, promotion of direct private investments through accelerated depreciation rates, sales tax

exemptions, reduced import duties for equipment, feed in tariff and formulation of Reneable Energy Standards (Wheeler & Shome, 2012). One small component of NSM's subsidy for overall solar energy, the small pie meant for solar lantern would be well spent, if really implemented in letter and spirit, though it would be a small contribution. Out of 72 million (Source: National Sample Survey Organization, NSSO 2006-07 figures, 68 million rural and 4 urban) households depending on kerosene only 20 million are to be provided with solar lantern by 2022. On economic, social and environmental (mitigation) parameters it would make some contribution in otherwise dull and dark lives of marginalized who are outside the reach of electricity and make do with polluting and expensive (subsidized kerosene is mostly black marketed - another scam and huge loss to economy and exchequer). The actual roll out for lantern has been real shaky, horrible by even Indian implementation standards. TERI (The Energy Research Institute) and Tata BP launched a campaign for purchase of 450 m solar lanterns, actually only 2600 were purchased!!! (Harriss- White et al, 2009).

As far as India's WTO compliance is concerned, we are more or less compliant and do not litigate too much, as per (Subramaniam 2013), one of India's most sweeping trade reform came into being post a US initiated WTO dispute on brad quantitative restriction on consumer goods. Admittedly, in the times of recessionary sentiment all countries would try to boost export and reduce import, so trade conflicts are bound to rise, trade imbalance is definitely a driver of ADD and other protectionist measures. China's Trade Minister Chen Deming predicted in 2011 "trade disputes to increase next year" (He, 2012). Earlier Solar was a sunrise but a nascent industry even in the renewable bucket and the price was, still is, relatively higher, so not many country and competitors paid much heed, however, the rates are falling and Solar is gradually muscling its way into high table of energy stakes, by 2012, solar PV has become a global industry worth \$90 billion (Lewis, 2012), now many want to have a greater share of the pie, so skirmishes are naturally increasing.

## 3. PROTECTION YES, BUT FOR WHOM?

Renewable resources in general and Solar in particular, have two important aspects - deployment & manufacturing. The stake holders of both the above groups are not necessarily identical, so their interests are also dissimilar. If protection is provided to manufacturing, deployment group gets marginalized. So here is a classic case of paying Peter (manufacturing) by robbing Paul (deployment – end consumers, clean tech industry (not necessarily confined to a national border, and the country as a whole).

There is a bigger picture in all this. That is the age old trade-off between private profit and public welfare, protectionism vs level playing field, country or trade block vs global renewable energy prospect etc. This narrative needs a more rigorous debate than taking a tunnel vision on the purported injury caused by so called dumped goods. Whose injury is it anyway? Of solar manufacturers'? Of end consumers'? Of the cleantech industry's? By imposing ADD, aren't the regulator(s) paying solar panel manufacturers / integrators by robbing others? In a somewhat similar case of conflict between of private profit and public welfare Indian Patent Authorities did the right thing – to stand by the majority and national interest, end users. Through Compulsory Licensing Nitco Pharma is making available some life saving drugs, some 92% cheaper, compared to MNC's evergreening efforts of keeping drugs in perpetual patent regime. Bayer, Pfizer and others are mighty upset about so called disregard for innovation, however, they are silent on the ripping off of consumers, evergreening manoeuvres that really bring no added benefits to users.

However, in this case of ADD on solar panel and components, opposite phenomenon is happening. To protect interest of select few, interest of a huge majority end users and interest of sunrise, cleantech industry is being sacrificed.

#### 4. THE DUMPING CASE

In selected circles the data floated goes like this - the leading Indian solar cell & module

manufacturers Moser Baer has shut down the facilities, Lanco, Indosolar - have reduced the plant operation by 50 %. In this backdrop, Solar Manufacturer's Association {Indosolar, Jupiter Solar Power Limited (DTA unit) and M/s Websol Energy Systems Ltd (SEZ unit)} filed an application before the Designated Authority in accordance with the Customs Tariff Act, 1975. Directorate General of Anti-Dumping, ministry of commerce found merit in the allegation and under Rule No. 5 of Anti Dumping Rules, levied anti dumping duty on imports of solar cells & panels, product under consideration (PUC), from US, China, Malaysia and Taiwan as Indian manufacturers have alleged material injury due to supposedly rampant dumping.

Two leading PV technologies - the crystalline silicon technology and thin film technology both are covered under the "product under consideration" category. As China is considered a non-market economy, normal value was determined in accordance with Para 7 and 8 of Annexure I of the Rules, on the basis of cost of production in India, duly adjusted for China, For USA, evidences of Normal Value in USA was based on price information published in a trade magazine (IMS Research). Solar Frontier, First Solar are some leading US players, NexPower is from Taiwan, Earlier, First Solar initiated a WTO case in which Indian defense was unsuccessful. Data was not available for Chinese Taipei and Malaysia, Normal Value was calculated on the basis of cost of production in India, duly adjusted for those countries respectively. There is prima facie evidence to show that the normal value of the subject goods in the subject countries is significantly higher than the ex-factory export price, indicating, prima facie, that the subject goods are being dumped into the Indian market by the exporters from the subject countries. Additionally, unfair incentives, such as subsidies, cash hand-outs, cheap electricity, cheap debt, free land, etc are being provided that entails, supposedly, an unfair advantage. Solar manufacturers demanded duty as high as 200% (Khurana, 2012).

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# 5. OTHER COUNTRIES'ANTI DUMPING STRATEGY

Perhaps the first reported initiative of ADD case was in 2009, German PV manufacturers Solar World & Conergy, ganged up to bring some punitive measures on Chinese through EU, however EU chose not to press charges then, they did in 2012.

Germans in 2009 alleged that China's Golden Sun and Solar Rooftop programs influence module cost favorably for Chinese and puts others in commercially disadvantageous position.

In 2010 Japan initiated WTO consultation against Canada over FIT (Feed In Tarriff) and US filed cases against China (Lewis 2012).

US' cases were filed under Section 301 of Trade Act, 1974. (Liu, 2013). These cases did not have as much bite as bark and offending parties got away lightly citing one or other loophole or removed subsidy once the effect of supporting indigenous industry was over.

By Jan 2012, Obama government started acting hawkish, set up Trade Enforcement Unit to speed up investigations of so called trade related infringements, however, industry was divided and having second thoughts due to its commercial interests being compromised. Coalition of Affordable Solar Energy (CASE) were not looking at these issues from the same perspective as CASM (Coalition of American Solar Manufacturing). CASE produced facts and figures citing some 60,000 job loss and loss suffered by consumers etc, CASM hit back with their side of the story on material injury, however, all these self contradictions, did reduce the sting of many investigations, Chinese clawed back and won some part reprieve on proving that ADD and CVD simultaneously is not legally tenable.

In similar cases elsewhere in 2012, China was target country in either cases (as shown in the table).

In an earlier skirmish, Mar 2011, WTO ruling and Sept 2011 US domestic Court declared that imposing ADD as well as CVD was "inconsistent" with

Table: 1 US'Anti Dumping cases against China (Jai & Seth, 2013, Liu, 2013)

Country / Block who levied anti dumping duty	Anti dumping duty	
US	31-250 %	
EU	47.6%	
US penalizing Chinese solar cells	CVD	
Suntech	2.9 %	
Trina	4.73 %	
All other Chinese companies	3.61 %	

WTO rules, US court declared Dept of Commerce action "illegal" as per US Countervailing law. WTO laws on dumping and anti dumping are in Article VI of GATT 1994 (ADA). However, US Congress, overturned the US Court verdict, passing HR 4150, continuing to apply CVD on subsidized goods (He, 2012). In retaliation, Chinese Ministry of Commerce started an investigation against a US poly silicon supplier, US- China trade war in Solar Energy sector is on since then (Liu 2013).

In 2011, US (Dept of Commerce) started investigation against Chinese solar panel manufacturers on complaint by Solar World Industries and associates, allegedly, normal price was 50 - 250 % higher than export price, China returned the favor by starting probe on alleged favor sought and received by US polysilicon producers. China submitted that US Solar World received m 43 \$ in tax breaks and public subsidy in a single factory in US and 136 million Euros in public subsidy in Europe (He, 2012). On antidumping cases the so called "truth" is elusive and is perhaps somewhere in between the warring parties versions. For China, being a non market economy (WTO would cease considering China a non market economy from 2016), undervalued currency (Yuan) are some handicaps that US, EU and Brazil have tried to exploit in trade conflicts, however, US stopped short of actually implementing punitive measures in some cases for the fear of retaliation.

To be fair to all the parties, not that US, China or other country manufacturers do not enjoy a bit of hand holding and generous support from their

respective governments, but that is the case with Indian manufacturers too. All countries' politicians, the prime movers of anti dumping and protectionist measures, to cater to their captive constituencies tend to favor protectionist demands, without judging the merit and long term implications.

Department of Treasury 1603 grant program created under the American Recovery and Reinvestment Act of 2009 provided a 30 percent grant to commercial solar investors if they commenced construction on projects before December 31, 2011.

Coalition for American Solar Manufacturing (CASM) comprising SolarWorld (the German firm involved in earlier discussions with the EU), Helios, MX Solar, and four unnamed CPV cell and module manufacturers filed cases on Chinese in Oct 2011, Chinese (Ministry of Commerce - MOFCOM) retaliated in Nov 2011, however, American Wind Energy Association (AWEA) and Coalition for Affordable Solar Energy (CASE) do not support protectionist measures against Chinese. Their pleading of dropping of petition when not heeded, they pressurized regulators citing job losses in the order of 60,000 and customers getting hurt more than the producers. (Lewis, 2012).

May be our indigenous solar manufacturers and integrators are not competent enough or wise enough to extract the cost efficiency, economy of scale, quality improvements, do indigenous or joint collaborative research, they need to see inward or out of the box instead of crying wolf over "material injury" by the usual bogey and red herring of foreign hand.

# 6. WTO ON SUBSIDY AND SUPPORT MECHANISM FOR LOCAL INDUSTRIES

The WTO Subsidies and Countervailing Measures (SCM Agreement) Article 3 bars: (i) Subsidies contingent, in law or in fact, whether wholly or as one of several conditions, on export performance ("export subsidies"); or (ii) subsidies contingent, whether solely or as one of several other conditions, upon the use of domestic over imported goods ("local content subsidies") (World Trade Organization 2012).

Table: 2
Top Ten Anti-dumping users, 1995-June, 2012

	All disputes	Disputes under deliberation	Disputes settled	Comp- liance
US as complainant	6	2	4	4
Other countries as Complainant	16	8	8	8
Total	22	10	12	12

Source: Economic Survey of India, 2013, cited in Subramaniam 2013.

Prohibited subsidies subject to multilateral dispute settlement and if found must be removed.

#### 7. INDIAN SCENARIO

375 MW worth of solar power is covered under 'Domestic Content Requirement' (DCR). This allows a non level playing field for local manufacturers, assemblers, integrators, still they claim suffering from loss of `1000 Crores.

DCR clause helps Indian players for c-Si (Crystalline silicon) under NSM (National Solar Mission) projects. DCR does not fall foul of WTO as India is not a signatory of Government Procurement Agreement (GPA). (Subramaniam, 2013). Compulsory licensing saved the day in Indian pharma, something similar needs to be done in Solar sector too, but not only for Indian panel manufacturers but the sector as a whole and for the customers, more for off grid customers. That can be done only by keeping the cost affordable. Anti dumping duty is not the solution to make the solar industry affordable, by bringing the tariff down, bringing in the reach of on grid and off grid customers.

Even if anti dumping is levied there can be a roundabout way to circumvent it by setting up contract manufacturing or subsidiaries. May be for that some transfer pricing issues or tax with retrospective effect, also by levying the anti dumping duties, inventing DCR clauses we are drying the tap of low cost funding (e.g. US Export-Import Bank) that indirectly helps the solar

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industry per se and keeping the end tariff in the reach of ordinary customer.

For an Indian perspective on subsidy, (Deshmukh et al 2010, Khaprade 2007), showed that for more than 33 kV utility grid, less than 33 kV grid, off grid (30-90 % capital subsidy), solar lighting systems and SIPS (Special Incentive Package Systems - 20-25 % capital subsidy for PV manufacturers) total subsidy worked out to be '36,000 Crores (NPV at 10%). This subsidized Solar electricity further on the crutches provided by CERC (Central Electricity Regulatory Commission) at set feed in tariff of '15.3 and '17.9 for solar thermal and solar PV for 25 yrs. Out of all above, only grid connected 1100 MW entails ' 21000 Crores (NPV @ 10 %), i e, ' 21 Crores / MW subsidy. There is excise and custom duty exemption for certain capital equipments, material and components. If still Indian manufacturers are crying wolf over subsidy enjoyed by certain countries and that they are dumping solar products below cost they are all barking up the wrong trees and as always Dept of Commerce tend to err (favor) towards local manufacturers, be it US or India.

The poor Indian taxpayers are paying for all this largesse. Only 7 % subsidy is for rural and poor, grid connected electricity enjoying subsidy is like creamy layer enjoying or cornering all the reservation benefits or fat cats riding CBU (completely built units) of Merc and Lamborghini after paying a hefty import duty still enjoying the APR (Administered Price Regime) price of fuel. Here is the gap of stated policy, lofty intent but flawed implementation. The subsidy that should have gone to off grid (meant for rural poor and have-nots in the electricity consumption) is being cornered by grid that do not deserve it. Indian players enjoyed tax holidays for production up to 2010, 20-25 % subsidy, reclassification for PV to be included in SEZs. Few state governments (Tamil Nadu, Bengal, Maharashtra and Rajsthan) are purchasing lands and guaranteeing return of 16% over 20-25 yrs for PV & thin film technology export firms.

GoI's Ministry of New and Renewable Energy's migration scheme for promoters to generate additional profit (at customers' expense) by realizing higher tariff of CERC and still having a committed buyer as NTPC Vidyut Vyapar Nigam Ltd. (an NTPC entity). By keeping the per Kw cost high whose interest is getting served? MNRE has been instrumental to extend subsidies to renewable including solar in the form of budgetary support for research, development & demonstration project incentives for financial institutions to invest in renewable, promotion of direct private investments through accelerated depreciation rates, sales tax exemptions, reduced import duties for equipment, feed in tariff and formulation of Renewable Energy Standards (Wheeler & Shome, 2012).

By hankering for more protectionist measures like ADD, Indian manufacturers are admitting that they are simply not able to compete with US, Malaysia, Taiwan what to talk of Chinese competition. Rather than ADD they need to adopt cost reduction measures, efficiency increase programs and invest in thermal solar than photo voltaic (the former is cheaper, as shown in CERC tariff), leverage the learning and experience curve (cost of high power band solar modules was about US \$ 27000/ Kw in 1982, in 2006 it's \$ 4000, installed cost of a PV system was \$ 16000/Kw in 1992, it's \$ 6000 /Kw in 2008, Jena & Jena 2014) and boost productivity. They should compete or get out of the market, instead of asking for crutches like ADD.

#### 8. CONCLUSION

Though ADD, CVD etc were devised by WTO to make trade smooth and to provide a level playing field, however, world over it has been abused more than being used. Home countries use it to offer undue advantage to local/indigenous vendors to get leverage over competition, mostly foreign. We have seen in some of the cases cited above, not necessarily always the claim of material injury is true. Also, ADD and CVD are often anti consumer and ultimately it restricts consumer choice. It is definitely not pro laissez faire and encourages monopolist, oligopolist tendencies and worse, cartelization.

Anti dumping, compulsory licensing and such tools should be used for the protection and welfare of customers or industries (clean tech, solar energy industry for mitigation, meeting climate change obligations etc), however, more often, they are abused

for jingoistic, protectionist purposes effectively doing more harm than help.

Fact remains, all countries, be it non market economies like China, paragon of supposedly Laissez Faire US, other market economies Germany, Japan, emerging markets like Malaysia, Taiwan and mixed economies and BRIC members Brasil and India, provide assistance to Solar Energy sector, and there is nothing sinister about it.

So, Indian manufacturers, system integrators should pull up their socks and strive to do more R & D and innovation led cost competitive manufacturing rather than clamoring for protectionist measures like ADD, CVD etc. Anyway, there is every possibility of circumventing these measures if foreign manufacturers start establishing subsidiaries and start local manufacturing.

Earlier Solar was a sunrise but a nascent industry even in the renewable bucket and the price was, still is, relatively higher, so not many country and competitors paid much heed, however, the rates are falling and Solar is gradually muscling its way into high table of energy stakes, by 2012, solar PV has become a global industry worth \$ 90 billion (Lewis, 2012), now many want to have a greater share of the pie, so skirmishes are naturally increasing. However this would be a zero sum game, of one move here and a counter move there, one favorable verdict here and a negative in another country, tit for tat measures in low level trade war continues, if looked at from "immediate returns only" perspective, so a broad based, long term, collaborative perspective, willy-nilly, has to emerge.

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