

## Do we lack ambition for a solar energy future

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As some of you are aware the IPCC in May 2011 brought out a Special Report on Renewable Energy Sources and Climate Change Mitigation. Somehow this comprehensive piece of work did not get the kind of attention that it deserved. However, the more I reflect on the energy challenge facing our country, the more I am convinced that we need to step up our efforts to develop and tap renewable sources of energy. An interesting news report which I read last week mentioned that on May 25 and 26, German solar power plants produced a record 22 gigawatts of electricity per hour, which represents an amount of power equivalent to 20 nuclear power stations at full capacity. According to Reuters, "Germany has nearly as much installed solar power generation capacity as the rest of the world combined and it gets about four percent of its overall annual electricity needs from the sun alone." A large share of power in Germany also comes from wind and other renewables. The big challenge with the use of solar energy is the problem of storage, and if suitable technologies are developed in this area, renewable energy production would grow by orders of magnitude. Germany's solar output, I believe, increased 36 percent, from 14 GW last year to 22 GW per hour last week. The country's total capacity is 26 GW.

Dr V V N Kishore would probably remember that many years ago we were doing an EC funded project on solar cooling for which the hardware we developed required testing in the sophisticated facilities at DLR (the German Space Organisation), Stuttgart. We waited several months but received no test results, which given the efficiency with which German engineers work, was baffling. However, when we checked, we found that the specified test required three days of continuous sunshine, a blessing which Germany had not received while they were waiting to carry out the tests.

And here we are, with an abundance of sunshine in several parts of the country, but a complete deficiency of vision and a bankruptcy of ambition to tap this universally accessible, perennially sustainable and totally indigenous source. Going on the basis of discussions that I have had with Mr. Amit Kumar, I am happy that our EETD Division is going to take up work on energy storage, which could bring about a sea change in the prospects for renewable energy use in this country. In fact, many years ago a colleague, who is not with us in TERI now, and I discussed the possibility of using solar energy for cooling so that those who ride two wheelers wearing helmets might employ such technology to cool their heads. At least that would reduce road rage and give these poor riders some relief and comfort from the heat, and avoid getting baked in temperatures exceeding the mid-forties. Road rage on the part of two-wheeler riders could be at least partly the consequence of these trying weather conditions. In any case, technology to cool helmets would be a boon for construction workers and others working in the open. Just think of the enormous increase in productivity that would accrue across the country with such technology! An exercise of vision and enlightened imagination would open up a new era in the harnessing of solar and other renewable energy technologies in a variety of ways for the benefit of society across the globe.

I wish there was some way by which we could mobilize the country to think about renewable energy in a practical but ambitious way for creating a sustainable future. A sustainable, renewable energy beckons us. So why are we so diffident about moving ahead?

*Source: TERI Intranet*