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**Billboard science**

Wind Dies, Sun Sets ... You need reliable, affordable, clean coal electricity. This is what I recently read on billboard after billboard while driving through Pennsylvania. Coal may be cleaner than it was, but it still produces massive amounts of CO₂. While I was upset at the message, I quickly began to admire the ability of the coal industry to communicate with the broad population. A billboard flashes by in seconds and sears its message. This is no accident. Huge amounts of money go into advertising campaigns. Claims are even made that solar panels emit radiation, as found on internet discussion forums such as Australia's "Whirlpool" (<http://forums.whirlpool.net.au>) and government policy recommending people should remain at least 4 meters away to avoid exposure as reported by the Israeli newspaper *Haaretz*. The materials community is at a disadvantage to fight against unsubstantiated claims as we do not have the resources to hire advertising agencies to do our work for us. What we can do is use our talents combined with the internet to get our message out. While science museum exhibits and NOVA shows are great, a large fraction of the population never sees them. Broadcast media (e.g., billboards, blogs, radio, and magazines like *People*) are the most common source of information for the general public. Luckily, these sources of information are losing ground to the internet. Hence, the materials community has a golden opportunity to reach the general public if we are smart about it. Our community can learn the skills of visual communication. We can learn how to make science simple enough for those without significant science education to understand. One pathway to achieve this might be to create scientific communication design departments at every major research university. The main purpose of these departments would be to train our scientists and engineers in the elements of visual communication and arm them with tools to broadcast simple messages via flat graphics, short video clips, and even billboards on Pennsylvania highways.

Steve Yalisove

Images incorporated to create the energy puzzle concept used under license from Shutterstock.com.
Energy Sector Analysis image of a variety of SuperPower 26 HTS wire types courtesy of SuperPower, Inc.

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