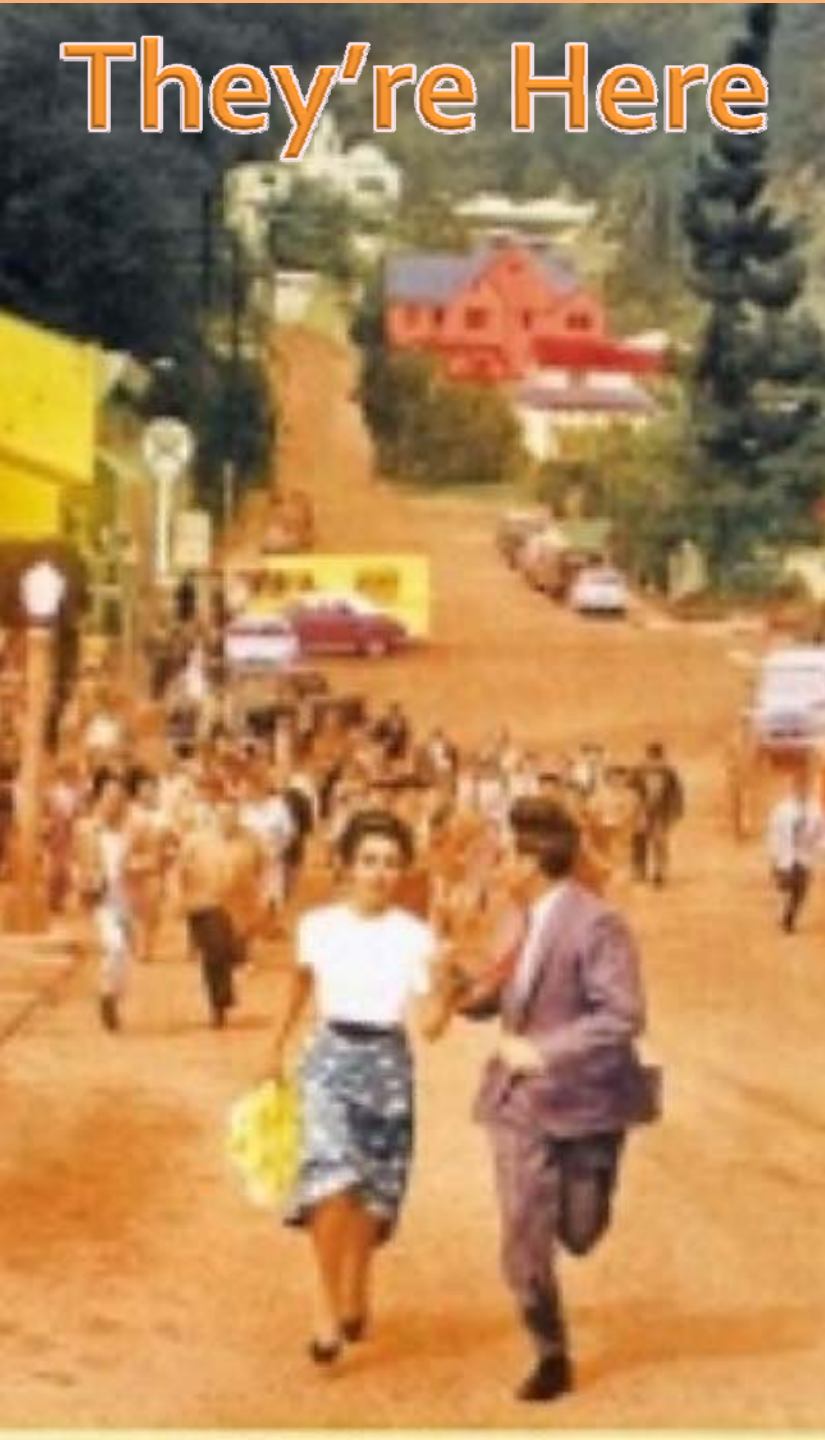


# Just Beyond the Horizon

Technologies to Watch



# They're Here



## 2004's Five Technologies

- RFID
- Biometrics
- GPS + GIS
- Wireless (Mobile) Computing
- Virtual Reality

# Just Beyond the Horizon



## 2011's Five Technologies

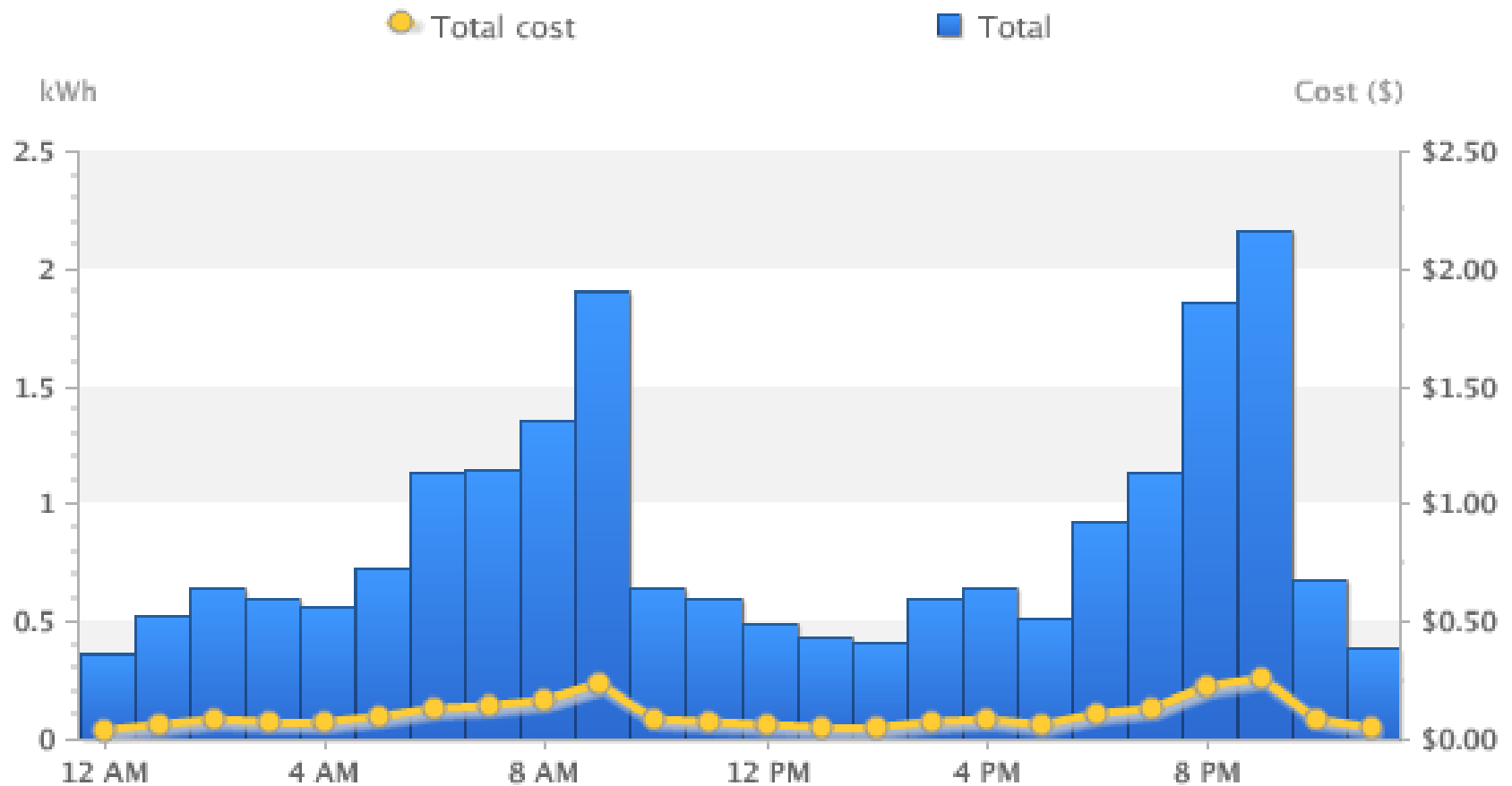
- The Smart Grid
- Nanotechnology
- Artificial Awareness
- Social Computing
- Virtual & Augmented Reality

# The Smart Grid

- The fastest growing sector in the GreenTech – and perhaps in the entire technology market.
- Potential reduction of electricity consumption by 30%.
- The Internet of Power Distribution – will democratize access to the power grid.
- What happens when 20 percent or more of the homes have solar panels and a cloud passes overhead?

# PG&E SmartMeter Data

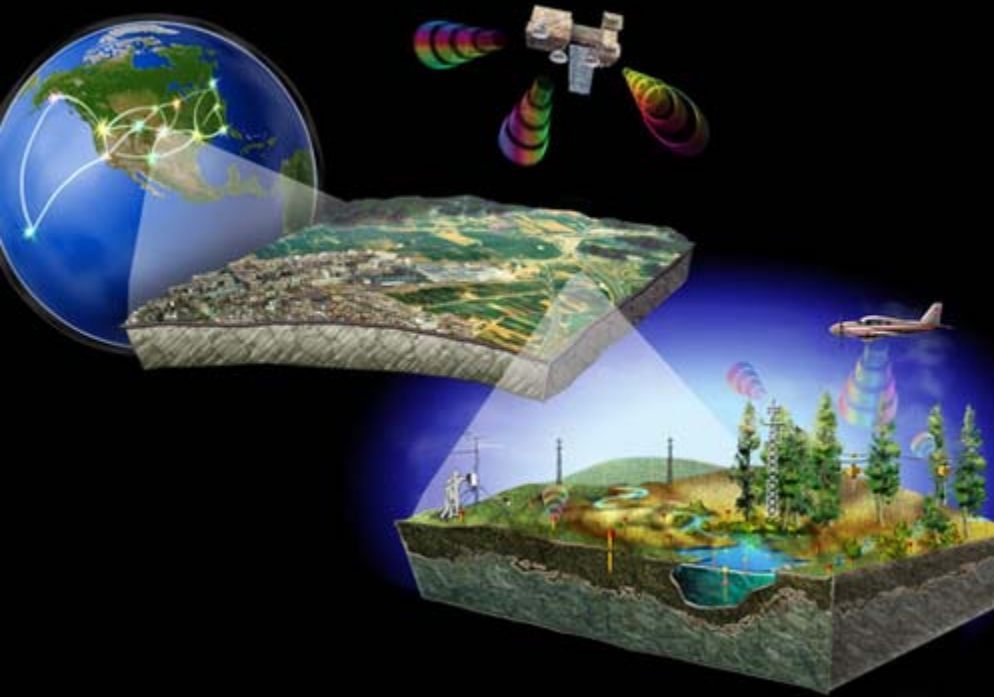
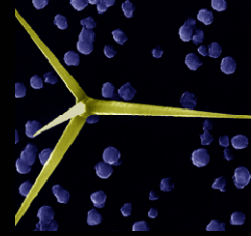
## Hourly Usage



# Nanotechnology

- Marrying materials and medical technology to produce a high-tech “fountain of youth”
- Improving solar panel efficiency
- Improving Catalysis
- Shrinking computer memory

# Artificial Awareness



- The Sensor Revolution - a profusion of devices that monitor the environment.
- "...connecting the Internet back to the physical world we live in - in effect, giving that world its first electronic nervous system."

# Social Computing



- “Social media is communication – communication what you’re doing, where you are, what you’re passionate about.”
- Uploading vs. Downloading
- “Social media should not just be 100 percent of one person's job, it should be one percent of 100 people's jobs.”
- Is it time for a Chief Social Media Officer?
- Social Media Management Tools

# Virtual & Augmented Reality



- The “Entertainment-Industrial Complex” – where Wall Street has displaced Pennsylvania Ave. as the source for capital formation.
- Avatar – the highest grossing movie of all time
- Microsoft’s Kinect Xbox 360 – motion sensing and voice command
- BMW’s augmented reality for car repairs
- Google Earth
- 3-D TV

We Are Here!

Image U.S. Geological Survey

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Data SIO, NOAA, U.S. Navy, NGA, GEBCO

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Imagery Date: 8/1/2010



1998

39°43'39.60" N 121°50'41.20" W elev 202 ft

Eye alt

262 ft



# What Does It All Mean?

- Solutions to 21<sup>st</sup> problems will be available. The larger question is whether or not we will have the individual and collective will needed to bring those technologies to fruition.
- "...our ability to affect the future is far greater than our ability to know the future."
- "...skate to where the puck is going to be, not where it has been." – Wayne Gretzky

# References

- [How Videogames Are Changing the Economy](#)
- [A Clean Energy Roadmap: Forging The Path Ahead](#)
- [Will Solar Crash the Smart Grid?](#)
- [Nanotechnology is arguably the greatest existential risk that humanity is likely to confront in this century](#) (video)
- [The World is Flat 3.0](#) (video)
- [Is it time for a Chief Social Media Officer?](#)
- [Interview with Omar Kahn ... about Social Media](#)
- [The Future of Social Media](#) (video)
- [Millennials will make online sharing in networks a lifelong habit](#)
- [Converging Technologies for Improving Human Performance: Nanotechnology, Biotechnology, Information Technology and Cognitive Science](#)
- [Imagining the Future](#)