An analysis between the state of solar energy development in Europe and the United States

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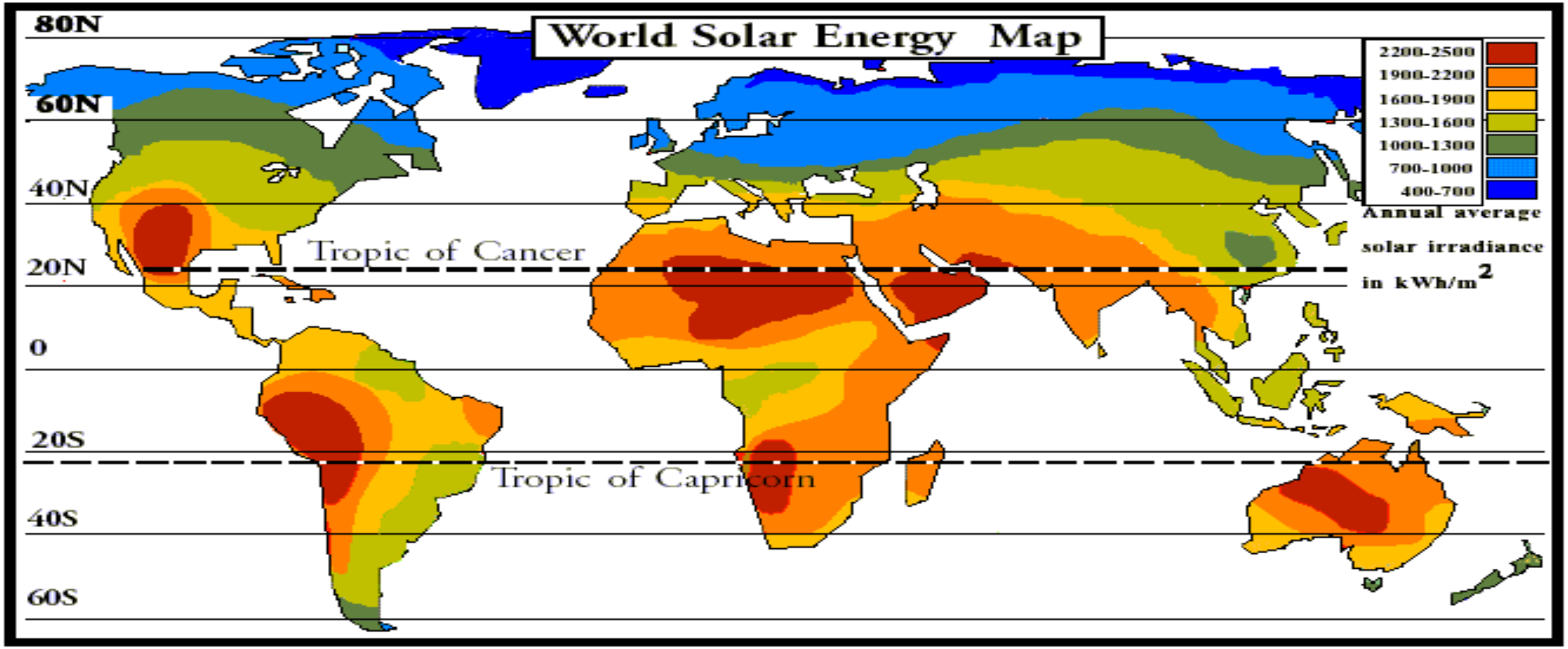
Total Energy Consumption

- Averages for 4 year range (2008-12):
- Europe: 82.81 Quadrillion BTU’s per year
- US: 96.88 Quadrillion BTU’s per year

Solar Energy Zones (SEZ's)

- Key environmental considerations for deciding SEZ's
  - Minimal site development
  - Not currently being cultivated or otherwise occupied
  - Uniform open land
  - Optimal sunlight exposure
  - Ideal SEZ will experience minimum 6 hours sunlight and 6+ kWh / m^2 / day

Regions With High Intensity Sunlight



Solar map depicts regions with highest intensity (seen in red).
(Notice SW region of United States.)

Cost Comparison: US vs. EU

United States		Europe	
CAPEX	$3,873 - $5,067/kW	CAPEX	$3,050-$3,500/kW
OPEX	$67/kW	OPEX	$35/kW

Conclusions and Recommendations

- US retains a vast area with large potential of developing solar energy
- Even with lower average solar irradiation when compared to the US, the European Union has been tremendously successful at developing solar energy technologies
- Take away lessons from Europe for the US to be successful:
  - Reduction in capital costs and proper financial incentives
  - A reduction of GHG emissions from the manufacturing process
  - Careful placement of production through proper land use compatibility and community buy-in