

Electrical Boston

In the backpages of my analytical notebook is the following blurb: *When it comes to the transition from liquid hydrocarbons, however, one wonders this challenge falls more naturally not to Silicon Valley, but Boston. The electronic components and equipment legacy of the area continues to express itself decade after decade, from strength to strength. The breeder-reactor of ideas and invention remains MIT of course, but 60 years on now from the end of WW2 and I think the landscape is more broad-based. Perhaps it's a tad unfair of me to say but Silicon Valley may have worked itself into a cul-de-sac of advertising-dependent internet businesses. My gut tells me Grid 2.0 is now likelier to emerge from Boston.*



Obviously I've pulled this passage out today because of the IPO of Watertown, MA based [A123 Systems](#), an innovative maker of lithium ion batteries. While exciting, the greater Boston area contains a number of companies that are likely to play a role as we transition away from liquid fuel transport. For a couple of years now, I've watched [American Superconductor](#), for example, as they work on the problem of lost power in transmission. More recently, because of my ongoing interest in google.org's self-made challenge to create [clean energy cheaper than coal](#), I noticed when Lexington, MA based [1366 Technologies](#) announced that was their mission too.

The riches of Boston are also conceptual and intellectual, however, and that's where an oil analyst such as myself--who studies historical energy transitions--starts to get interested. Because frankly in the United States I like the laudable restraint I find in Boston to the American tradition of techno-utopianism. Yes I am speaking quite generally and loosely here but some of the work, for example, that has emerged from MIT's solar group in addition to the technological

advances has addressed the herculean task of transition itself--in all of its daunting scale. You simply have to like a tech community that is not only making advances in energy solutions, but, pulls up a fresh whiteboard to address the labor, manufacturing capacity, and time it will take to complete a buildout. As an antidote therefore to [the nonsense of algae and biofuels](#), readers are encouraged to watch two MIT videos--the first from [Tonio Buonassisi](#) and the second from [Marco Baldo](#).

The open question I have is the extent to which venture capital in the US understands our current moment, as the transition away from liquid hydrocarbons is now underway. For those of us in the oil analytical community, the issue is largely settled: we are going to the grid because we have no choice. However, for society at large, the discussion is still polluted by [poorly framed](#), [poorly researched](#) and largely [political posturing](#) on the issue of global oil supply. Meanwhile, for those who are investing in the grid--everything from solar to storage, to switching, cable, delivery, wind and batteries--one wonders how much they understand how powerfully supportive to their case is the decline of oil supply, in both nominal and real (EROI) terms. Energy transition is not discretionary. The victors will understand this, and to them will fall the spoils.

-Gregor

Graphic: Map of Boston from 1844.

Further Reading: [Bob Metcalfe: Internet History Applied To Solving Energy](#) - a Slideshare presentation, March 2009 Boston/San Francisco. | [Energy transitions past and future](#) -Cutler Cleveland, et al, 2008 | [The Burden of Transition](#) - Gregor.us | [Robert Hefner: The Grand Energy Transition](#) - a FORA.tv video presentation.