

Got Tip? Understanding and Affecting the Outcome of Dramatic Change

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ABSTRACT

The day we knew would eventually come is here. A constellation of events including turmoil in the Middle East, sky-high fuel prices, and extreme weather patterns have captured public attention. Concerns about the future price and availability of fossil fuels, and about the effects of climate change are top-of-mind for individuals, businesses, and governmental bodies at every level. People want to reduce their energy use and purchase clean, renewable power. They are seeking council and prepared to implement recommendations from experts in our field. This is the moment practitioners in energy efficiency have been working to bring about for 30 years. Are we making the most of it? Have we considered and ranked our priorities, and can we explain those priorities to people in other industries? What key questions and topics we should advocate? What outrageously big idea would we like implement if money and resources were not an obstacle? Have you discussed these ideas with your colleagues? Have you taken the time to genuinely congratulate one another for our individual and collective achievements?

This paper discusses recent developments in energy efficiency and related fields, framing the issues in terms of the popular “tipping point” metaphor for describing, and affecting, change. Practitioners in these industries are encouraged to note the opportunities that may become available to us, and to think ahead about goals and strategies that will guide our industry in the next phase of development.

Background

The day we knew would eventually come is here. A constellation of events seem to be aligning to captured public attention, including geopolitical turmoil in energy exporting regions, depleting sources of hydrocarbon based fuels, and extreme weather patterns. As these events converge they are becoming top-of-mind for individuals, businesses, and governmental bodies at every level. Individuals and decision-makers are among those who now want to reduce their energy use and instead use less energy while purchasing clean, renewable power to meet their remaining needs. These people and their organizations are prepared to act – but what should they do? Many are seeking council from us – the experts in energy efficiency, renewable energy and related industries. What shall we tell them? How shall we organize ourselves and our work to best respond to the rapidly shifting situation?

This shift in public consciousness about environmental issues and energy in particular is the beginning of the moment professionals in energy efficiency, and related fields of practice have been working to bring about for 30 years. Are we making the most of it? Have we stopped to assess opportunities that did not previously exist but may now be available to us? What new goals shall we set for ourselves?

The Tipping Point is a concept and a phrase popularized by Malcom Gladwell in his book of the same name, initially published in 2000 (Gladwell 2000, 2002). Gladwell’s book focuses on the moments when a phenomenon or event or idea spreads suddenly and dramatically – the

“tipping point”. This concept caught the attention and imagination of the American public, the book was a #1 best seller, and the phrase “tipping point” has become a rather overused concept in the social science lexicon, applied widely as a metaphor describing many types of change. In fact, the concept of has been embraced and written about so broadly in recent years that term “tipping point” is arguably over-used and beginning to sound trite. This does not lessen, however, the suitability of term framework for describing phenomena associated with sudden or apparently sudden increases in rate of change in a situation.

“Tipping point” as worn language is matched and perhaps exceeded by its sister term “paradigm shift” which describes disturbance in the rate of change specifically with reference to cultural structures that characterize and bind social groups at any given time. A paradigm is a set of ideas about truth, causality, sources of value and so forth. Changes can also occur in social structures, ideas, or as a personal epiphany. Thomas Kunh coined the term “paradigm shift” in his 1962 book *The Structure of Scientific Revolutions*. He was particularly interested in the evolution of scientific ideas and how they contribute to a group’s shared cultural understanding of the world. However, it was Marilyn Ferguson who truly popularized the term “paradigm shift” in her book *The Aquarian Conspiracy* published in 1980. Ferguson was interested in exploring the process set in motion when new information incompatible with key ideas in an existing paradigm arrives or accumulates sufficient weight to changes the minds of individuals within the group, ultimately giving rise to a new paradigm or set of ideas shared in that culture. The new paradigm modifies or wholly replaces the first, resulting in widespread social change.

Having noted that so many aspects of our industry appear to be at a tipping point, or undergoing a paradigm shift, the authors of this paper sought to identify an alternative term or framework for describing dramatic change, with the idea that a new vocabulary or perspective might offer a more interesting or fresh approach. However, upon review, the concepts and patterns presented in Gladwell’s analysis of tipping points remains the preeminent construct for discussing dramatic change. It offers a compelling initial vision that has been drawn upon and enhanced by authors and researchers addressing a stunning variety of topics. Our industry and related areas do indeed seem to be at a tipping point. The tipping point framework, as extended by journalists, philosophers and scholars provides a useful basis for understanding, and ideally, *affecting* the future we and our colleagues will find ourselves inhabiting as a result of the tip.

The introductory section of this paper begins with a review of recent media headlines indicative of a dramatic change underway in the American public’s understanding of, and willingness to embrace energy efficiency, renewables, sustainability, and perhaps the human relationship to Earth’s environment in general. Next, basic concepts of the tipping point analysis, including key features and strategies for creating or managing outcomes of dramatic change are presented and then discussed in the context of current events in energy efficiency and similar fields. The paper concludes with ideas for energy professionals – or any reader – to consider as strategies for affecting the outcome of this or any tip, if desired.

Introduction

In the News

Public awareness of, and interest in energy efficiency, clean energy, sustainability in resource use and environmental issues in general has been steadily increasing over the last 25-30 years. This hard-won progress has been made possible by individuals and small organizations

who understood, before others did, the potentially negative consequences of environmental degradation, dependence on foreign resources, and other negative outcomes of unmanaged consumption of energy resources. These individuals and organizations arose to address in many separate but related issues such as transportation, air emissions, recycling, and renewable energy, among others. Over time, these fields independently developed infrastructure, methods and approaches, certification standards, and the other trappings indicative of maturing industries. Although these fields have been simpatico in an overarching sense by addressing issues that affect the environment, the specialties developed rather separately, with unique structures, terminologies, regulation, target audiences and so forth. Metrics used in one industry are not particularly compatible with one another without expert analysis and translation. A number of these industries have been growing large enough that they were experiencing overlap. Some have initiated attempts to educate one another and establish common metrics and vocabularies where possible.

Energy efficiency, renewables, clean power, greenhouse gas reduction and related fields have been slowly but steadily increasing public awareness and interest in their products. Professionals in these fields have noticed this steady growth, by progressive increases in regulatory and market-driven developments, and observable via increasingly frenzied work schedules and requirements for keeping up. At the same time, progress has been erratic and we may have a zero sum gain. Witness the growth of market for inefficient SUVs while at the same time efficient LED equipped traffic signals now control many intersections. However, rather suddenly, interest from the public, businesses and government sectors is expanding at an increasing pace, and this may portend a shift towards efficiency that applies across all markets. There is ample evidence, including a somewhat astonishingly fast emergence at the center of mainstream topical thought in early 2006 that may portend this shift. Examples include recent Newsweek and Time magazine cover features on the impending perils of climate change. Other example abound; at the time of this writing mid-year, headlines such as these have become commonplace;

Proposal Targets Global Warming: State Seeking Limit on Greenhouse Gasses
California is poised to become the first state in the nation to enforce a comprehensive limit on the air pollution that causes global warming, under legislation announced Monday. The bill, which mirrors the goal set by [Republican] Gov. Arnold Schwarzenegger last summer, would limit greenhouse gas pollution to 1990 levels by the year 2020, and require the state's Air Resources Board to establish a mandatory reporting system to track and monitor emission levels. [The bill is co-sponsored by the Democratic Speaker, Fabian Nunez, and Democrat Assemblywoman Pavley.] ... (Garcia 2006).

*Bold Steps Urged on Global Warming:
Rapid Action Is Only Course, Scientists Say*

Many scientists say the world is moving closer to the point at which it will not be able to avert global warming disasters such as drastic climate upheavals and severe rises in sea levels. There is still time but stopping or delaying them will require bold changes by both individuals and the government, according to several climate scientists ... (Borenstein 2006)

Power to the People: Art Rosenfeld Helped Make California the Most Energy-Efficient State in the Country. Could He Do the Same for the Whole World?
... California [is] ... fashioning a new framework of utility regulations that places greater emphasis on efficiency than ever before. Through 2008, utility companies plan to spend \$2 billion – a record for any state – to help Californians save energy. The investment will yield a net gain of \$3 billion in economic benefits for the state by reducing utility bills. “This efficiency campaign will avoid the need to build three large power plants ...” (Canine 2006)

When, exactly, to pinpoint a shift may not be clear, and the change in momentum may be apparent to individuals in different parts of the country or the industry at different times. However, this explosion of interest in efficiency and clean energy may well be a tipping point leading to a fundamental change in society’s relationship to these topics – a tipping point.

The Tipping Point Model of Change

In his book *The Tipping Point*, Malcom Gladwell describes the ebb and flow of ideas and trends, and in particular, instances of rapid, dramatic movement, when everything can change all at once, based largely on an analogy with public health research on the development of epidemics. He proposes that three characteristics affecting the spread of health-related or biological epidemics also hold true for the social “epidemics” – the spread of ideas or trends.

- ◆ Contagiousness – the opportunity for a virus, a behavior, or an idea to spread to others
- ◆ Little causes can have big effects
- ◆ Change happens at one dramatic moment rather than gradually.

According to Gladwell, three rules govern a tipping point. The relative strength or weakness of these characteristics can affect whether a trend “tips” or does not. Dave Pollard summarized the “laws” elegantly on his blog *How to Save the World* (Pollard 2003).

- ◆ The Law of the Few – A few exceptional people ... incubate a trend. These people, who Gladwell calls “mavens” have the energy, the vision, the style, the intelligence, the charisma, the perseverance to rub two sticks together in a way they probably catch fire. Incubation also requires people called “connectors” who have ... acquaintanceship with people who move in a lot of different circles who they enjoy bringing together, so that the epidemic reaches escape velocity ...
- ◆ The Stickiness Factor – Some attribute f the epidemic allows it t endure long enough to “catch”, to become contagious or “memorable” ... [it involves packaging information to] ... “make it irresistible.”
- ◆ The Power of Context – The physical, social and group environment must be right to allow the epidemic to then suffuse through the population ...” (Pollard, 2003.) It is useful to understand that Context has a special meaning in the tipping point model. There is an emphasis on the fact that frequently, small, subtle changes in a message or an environment or other

feature of the situation or context may be more powerful in producing (or preventing) a tip than broad sweeping efforts designed to facilitate change. Small cues can change people's perception or perspective about the appropriate response or behavior in a given setting. People do not always realize that these contextual cues are affecting their behavior, but dramatic, observable shifts can occur when these cues are changed.

Theorists in many fields have given thought to the tipping point philosophy. A natural extension of Gladwell's framework is to consider the possibilities for harnessing and controlling the factors that influence whether a trend will tip or not. A recent book on organizational behavior examines the possibilities for understanding and facilitating organizational change. In *Creating Contagious Commitment: Applying the Tipping Point to Organizational Change*, Andrea Shapiro describes the possibility for using tipping point theory to facilitate change by enabling facilitators to manipulate the "Law of the Few," "Stickiness Factor," and "Power of Context" to either facilitate a rapid dramatic change or tip, if desired, or as a means of preventing a situation from tipping, if prevention is the desired outcome.

... [The tipping point theory] is a new dynamic and systemic model that can help us understand how organizational change really happens and how to achieve real results from it ... by integrating lessons learned from public health and systems thinking its power goes far beyond existing models of change ... It helps provide a theory for how ideas spread that can be leveraged to make the changes both successful and sustainable... The purpose of this book is to help you turn the lessons from public health inside out to create an epidemic of enthusiasm for a change that is important for ... success (p. 5-6).

Shaping the Tipping Point in Efficient and Clean Energy

If indeed we are at a tipping point in energy efficiency, clean energy and related fields, what are the implications? Does the tipping point model offer ideas for affecting the rate, scope, content, and direction for the tip? The theory does not provide answers to these questions, but may offer insight regarding efforts to affect the process, timeframe, rapidity and/or outcome of this potentially dramatic change in public consciousness. While there is no one solution, several steps are necessary and useful for understanding and responding to a change, and possibly using the momentum of the tip to enhance the desired outcome.

What to Do When You Suspect your Industry Is Near a Tipping Point

The most valuable lesson implied by the tipping point approach is the implied invective to pay attention to signals precursing impending change, or offering an opportunity to bring change or prevent it from occurring. Having stopped to consider the implications of tipping, and scenarios describing the post-tip situation, several reasonable activities aimed at adjusting early in preparation for the new future, and/or affecting the outcome of a tip in order to help shape the results. A series of easily achievable steps to prepare for a tipping point are described below, including what features of the tipping point model, if any, are applicable at this juncture in energy efficiency, and related clean energy and resource industries.

- ◆ **Stop everyday activities and assess the situation** -- Stop for a moment and assess the changing dynamics of the situation. If, in fact, a dramatic change is underway in your industry or will soon be, consider the magnitude and direction of the change. *The tipping point applied.* Are we amidst or about to be engaged in a tip? It would seem so, in particular regarding the public's perceptions regarding the importance and efficacy of energy efficiency and clean energy strategies in general. It would be beneficial to discuss this sense with colleagues in related industries and different areas of the country to see whether their experiences corroborate the dramatic changes we are experiencing here in California, in efficiency and renewables, to gauge the potential magnitude of this paradigm change.
- ◆ **Imagine the array of possible outcomes** – Think through the likely outcome of the impending shift. Is it obvious what the new paradigm will be once a change is made? Or are many variables changing at the same time, rendering it difficult to predict an outcome with much certainty. Brainstorm with colleagues visions ranging from a scenario where the paradigm change results in a very small change to dimensions of the situation affecting your personal, business, or policy goals. Now brainstorm a scenario in which the change is as enormous and far-reaching as you can imagine. Develop a sense of the likely outcome of this change, and the factors affecting it, and use any new information to update the vision or range of visions you believe represent the post-tip future.
- ◆ **Articulate and compare current, new, and stretch goals** – What goals have you and/or your organization, and possibly the entire industry, been seeking to accomplish? If a tipping point is near, are the overarching goals given the state of the world post-tip going to be the same as your current goals? If not, what are the new goals, or what might they be? Use the brainstorming technique described above to imagine modest, outrageously large, and sensible, moderate goals. Think about what kind of effort it would take to reach these goals. Then think about changes in the situation or context that would make seemingly unreachable goal fall easily within reach. Discuss these ideas with friends, loved-ones, and colleagues both inside and outside the industry.
- ◆ **Congratulate yourself, partners and colleagues if facilitating the impending tip was a goal you worked to achieve** -- Was bringing about a paradigm shift one of the goals you, your firm, organization or industry have been attempting to accomplish? If this is the tipping point you've been working to achieve, stop and congratulate yourself, your colleagues and partners for a job well done. Work can be so busy, especially during dramatic change. If this tipping point is beneficial and your efforts helped bring it about, congratulate yourself. Compliment your colleagues and partners. Savor the importance and value of your contribution.
- ◆ **Assess the value of current and planned activities, in the context of likely post-shift scenarios** – If your industry is changing or perhaps a much larger swath of society is changing (e.g., the world's overall approach to energy and resource use), how will you and/or your firm or organization respond? Are the activities you and/or your organization or for that matter, the entire industry currently engaged in the most valuable use of your time, given the expected outcome of the tip? If not, what should you be doing instead? Brainstorm to generate a range of ideas and options.
- ◆ **How would you (or your firm, organization or industry) like to guide the direction, speed, degree, scope, and post-tip scenario, if you could?** Consider personal and larger goals, and what features of the post-tip situation would be useful or necessary to

render those goals achievable. Are there any “levers” it might be possible to adjust during the change in order to enhance the possibility of achieving a setting most conducive to achieving these goals? Brainstorm.

Consider personal and larger goals, and what features of the post-tip situation would be useful or necessary to render those goals achievable. Are there any “levers” it might be possible to adjust during the change in order to enhance the possibility of achieving a setting most conducive to achieving these goals? Would it be best for the tip to be larger and encompass more areas and ideas? Or is a focused, localized dramatic change the most beneficial outcome. Is it possible to affect any of these features of the tip to shape the outcome – for example, catchy irresistible messaging regarding clearly defined goals, enlisting the right cluster of “a few” special people – trendsetters, experts, people with a large number of acquaintances. Brainstorm.

Thoughts on the Tipping Point in Energy Efficiency, Clean Energy, Etc.

What features of the tipping point model, if any, are applicable at this juncture in energy efficiency, and related clean energy and resource industries? How can our industries use this information to affect the tip and increase the likelihood of beneficial outcomes? Strategies for coping with a tipping point are described below, with specific reference to the tipping that feels underway or almost underway in the realm of energy efficiency and clean energy.

- ◆ **Stop everyday activities and assess the situation** – Are we amidst or about to be engaged in a tip? It would seem so, in particular regarding the public’s perceptions regarding the importance and efficacy of energy efficiency and clean energy strategies in general. It would be beneficial to discuss this sense with colleagues in related industries and different areas of the country to see whether their experiences corroborate the dramatic changes we are experiencing here in California, in efficiency and renewables, to gauge the potential magnitude of this paradigm change.
- ◆ **Imagine the array of possible outcomes** – So many variables are in play at this time, the change could be quite dramatic. Whatever the outcome, in an era of rapidly rising oil prices, international competition for the available fossil fuels, concerns about homeland security, attractive developments in efficiency, renewables, etc. and the potential for jobs in new “green” industries, the potential post-tip scenarios look good for efficiency and renewables.
- ◆ **Articulate and compare current, new, and stretch goals** – Have we considered and ranked our priorities, and can we explain those priorities to people in other industries? Our goal has been to create an industry supporting energy efficiency, with everything from science and emerging technology research, companies that manufacture efficient equipment, firms that deliver equipment (often via utility or publicly-sponsored programs), measurement, administrative and regulatory infrastructures. We have achieved the goal of creating an industry and helping raise public awareness to such a high level we may be reaching a tipping point.
- ◆ **Congratulate yourself, partners and colleagues if facilitating the impending tip was a goal you worked to achieve** – Undoubtedly the public, governments at all levels and even some businesses are beginning to embrace efficiency, clean energy and even sustainable resource use to such a dramatic and unprecedented degree, the change will

represent a true tipping point. This change was brought about by the hard work of all of us, our colleagues and our partners in related industries. Stop and congratulate yourself and the others!! Do not miss this opportunity!!

- ◆ **Assess the value of current and planned activities, in the context of likely post-shift scenarios** – Given likely scenarios for the future, is the work that we are doing the most valuable use of our time? An issue that comes to mind is the time and resources we devote to refining research methods or giving presentations to one another on topics most of already understand. This is a moment when the return on investment for our efforts would be enormous for time spent reaching out to related groups and industries, attempting to understand their needs and challenges, and how efficiency or clean fuels can work for them. We can get back to refining our research approaches and filigreed methodological discussions in a few years, if necessary.
- ◆ **How would you (or your firm, organization or industry) like to guide the direction, speed, degree, scope, and post-tip scenario, if you could?** -- This step is intimately related to the goal-setting ideas discussed above. What are our industry's goals for the nature, scope, timing and results of the tip? Does this paradigm shift include just energy efficiency, efficiency and renewables, all clean energy, or possibly, sustainable resource use as a fundamental planning principal? What are the implications of influencing the messaging or “framing” of the paradigm shift? Is a focused change more beneficial than a global change affecting and/or joining together many “green” industries? What key questions and topics we should advocate?

What outrageously big idea would we like to achieve if money and resources were not an obstacle? Is it still beneficial to proceed in a logical fashion to develop common terms and metrics? Or will the new paradigm be so different from the current situation as to render these questions moot? We must brainstorm with others to generate visions regarding a range of possible outcomes, and set priorities and goals with the flexibility to change as the situation evolves.

Conclusions

The tipping point framework offers a number of insights that can be helpful in recognizing, understanding, responding to, and possibly affecting dramatic changes in the nation's and possibly, the world's relationship to energy efficiency, clean energy, and resource use. This paper presents a series of useful, practical steps practitioners in energy efficiency can use to prepare for, and quite possibly affect the outcome of the tip – the moment when everything changes and nothing is the same as before.

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