A SECOND RESTRUCTURING

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Restructuring Roundtable

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Thank you for having me here this morning, for what I anticipate will be my last major speaking engagement as Secretary of Energy and Environmental Affairs. I intend to describe the energy waterfront as I see it – I have reviewed the thrust of my remarks with my successor and with the Governor, so I want to be clear that my remarks also reflect the policies and priorities of the Governor as he moves into his second term.

Let me begin with thanks. First, to all of you. You have all been participants, proponents, advocates (and yes, I am sure, a few holdouts) in a remarkable transformation of our energy framework. I appreciate your activism and commitment – to the degree we have had success, it truly has a thousand fathers. Many of you in this room should be proud owners of the legacy we have created together in Massachusetts over the last four years. For the record – let's see a show of hands: how many of you believe there will be a solar industry in the United States going forward? How many believe that there will be an offshore wind industry? Ok, good – I will get back to that.

My greatest thanks go to Governor Deval Patrick, my friend and the best boss in the Commonwealth. I have had great fun over the last four years and feel proud of my run as Secretary of the first state-level Cabinet agency in the nation encompassing both energy and environment. Combining energy and environment under a single Cabinet secretary was Governor Patrick's idea, and for this idea the time was right.

Energy agencies and environmental agencies used to work at cross-purposes, constantly fighting one another. Not any more, at least not in Massachusetts. Our energy agencies are now charged with an environmental mission, reducing greenhouse gas emissions through energy efficiency and renewable energy, while our environmental agencies are now committed to clean energy in wastewater treatment, on farms, and in all public facilities. On top of that, all our agencies are, for the first time, partners in an economic mission – supporting the growth of a clean energy industry that will make Massachusetts the envy of the nation, if not the world.

It is particularly appropriate that I am winding up my time in office addressing the Restructuring Roundtable. I have spoken here four times, first previewing, and then reporting on, our progress toward creating a clean energy future for the Commonwealth. As I prepare to leave my state post, I am grateful to have this opportunity to reflect on

what we have accomplished in the past four years, and, I hope, leave you with an important message for the future.

Here is that message: there is a second restructuring well under way, as a result of the Green Communities Act and the Global Warming Solutions Act. Neither of these acts of the Legislature in 2008 have “restructuring” in their names, like the Electricity Restructuring Act of 1997, but their impacts on energy markets and institutions will ultimately be more profound as they play out over the next several decades. And understanding the implications of this second energy restructuring will be every bit as important as understanding the first one.

The Restructuring Roundtable came into existence to help everyone involved in the electricity industry understand the Electricity Restructuring Act of 1997, with its breakup of vertically integrated utilities and introduction of competition in the wholesale electricity market. Now, New England has the most open and competitive electricity market in the country, and the results are impressive: 9600 MW of new gas fired generation was built, representing $10 billion of private investment. Greenhouse gas emissions from power plants are down 12 percent.

The 1997 restructuring also laid the foundation for the second restructuring now under way. The 1997 act established one of the first Renewable Portfolio Standards in the country, and provided resources, through a Systems Benefit Charge, to support the development and deployment of renewable energy technologies that provide cleaner, more sustainable alternatives to fossil fuels, as well as, unlike many states that implemented restructuring, maintained a significant SBC to continue energy efficiency programs in the post-restructuring era..

But while the 1997 restructuring shook things up in a way that stimulated investment and competition – both things that contributed to the public good – it was a restructuring that lacked an explicit public purpose beyond efficiency and competition. Public purpose is exactly what the second restructuring is all about – energy independence, price stability, lower greenhouse gas emissions, and above all, cleaner energy resources all of which will directly lead to stronger economic future for the Commonwealth. It is a matter of setting a new direction within the competitive structure of our energy market. Indeed, with great clarity, the Governor and the Great and General Court have declared that it is an overriding public purpose in the Commonwealth of Massachusetts to move forward aggressively with renewable power, energy efficiency and reduction of greenhouse gas emissions.

While not requiring any entity to divest assets or otherwise alter the basic energy market framework, the Green Communities Act created a new set of mandates, purposes and expectations about the way we use and generate electricity going

forward. Energy efficiency was put in competition with supply in meeting our energy needs. Instead of being an add-on service that utilities could provide their customers on a limited basis, energy efficiency became the Commonwealth's "first fuel," utilized whenever it is cheaper than additional generation. In tandem, the Dept. of Public Utilities issued a decoupling order, breaking down a century's worth of barriers that kept the utilities from embracing the full potential of efficiency (and distributed renewable power) as ways to meet their customers' energy needs. Aligning incentives properly has given us the most ambitious energy efficiency program in the nation – the greatest investment per capita of any state in the country. The first three year plan alone is expected to deliver $6 billion of savings for customers from $2 billion of efficiency upgrades.

Our energy efficiency program now leads the nation – and while others are following us, that does not mean we should be satisfied with the pace of progress. It is a topic for another day, but I believe we need to fix our eyes firmly on the next bold step for energy efficiency. We need to challenge ourselves to build a model that will reach every household and business in Massachusetts in a timeframe that is appropriate to the advancement of technology – every consumer should have the opportunity, incentive and engagement to update their home and business as major advancements become available. Our penetration of true retrofits still lags way behind the need. Today, there is no energy efficiency retrofit model in the United States that has that ambition and a detailed gameplan to back it up. Consumers have many options for things like telephone, internet and media – and these products engage the consumer in a way that we have never seen on energy bills. That needs to change and change quickly.

We changed our building code so that it conforms to the highest available standard – and then we raised the standard on an elective basis for towns/cities. The "stretch code" we created to allow municipalities to require greater efficiency on a local-option basis – more than 60 communities have signed on – has now been adopted as the 2012 IECC standard that Massachusetts, and many other states, utilize for setting their requirements. The stretch code itself was considered controversial for a time – but now virtually all the major cities of Massachusetts have adopted it and it is well on its way to becoming the new national standard. We are leading the way – and others are following.

In renewables, we doubled the rate of increase of RPS – from ½ percent per year to a full percent – so that we will be getting 15 percent of our electricity from new, renewable sources in 2020, and even more thereafter. With long-term contracts to facilitate development of renewable energy generation, we will bring substantial new renewable power resources to market. Same thing for solar, as the solar credit program will support installations that not only meet but exceed Governor Patrick's goal of 250

MW by 2017. The Massachusetts solar credit program is quickly now setting a national standard as a cost-effective and (in light of rapidly declining solar installation costs) flexible alternative to the first generation of solar programs based on the feed-in tariff model. We get regular calls from other states looking closely at our model. Again, Massachusetts is leading the way.

The other piece of the second restructuring comes from the Global Warming Solutions Act of 2008. We have the strongest greenhouse gas emissions law in the country, and I am required, by the end of the year, to set a legally enforceable 2020 emissions reduction mandate for Massachusetts between 10 and 25 percent below 1990 levels. Thanks to the GCA and other measures, we estimate getting to 18 percent below 1990 without any further actions. That is far beyond what any other state has done to reduce greenhouse gas emissions, so as we reach beyond that, in the 2020 limit I will set in the next two weeks, we will be setting a new standard for the nation. Others will surely follow.

These measures and others are putting Massachusetts on a path toward a clean energy economy – and we are getting noticed for doing so. Governor Patrick was recognized by the Alliance to Save Energy for his national leadership on energy efficiency. Clean Edge, Inc., has, in two separate reports, named Massachusetts as the East Coast leader on clean energy technology, policy, and financing. The annual *Freeing the Grid* report gave Massachusetts top ranking in the two key policies that support customer adoption of renewables: net metering and interconnection. The Commonwealth's grade in that report jumped from "C" to "A" in four years.

That is a record to be proud of, but not everyone is happy about it. There are some who say the measures we are taking in this second restructuring go too far: they are too expensive, and they will hurt the economy. I respectfully, but strongly, disagree. Keep in mind the basic facts of energy life in the Commonwealth: with no coal, oil, or natural gas of our own, Massachusetts pays high prices for the energy sources we import from elsewhere, and there is nothing we can do about that. What we *can* do is reduce our energy use through efficiency, and diversify our fuel sources to capture more homegrown wind and solar energy that keeps dollars here and reduces greenhouse gas emissions. And as we do that for ourselves, we create the technologies, the products, the services the world needs now and in the future.

Let me go straight at one point of contention: Hydro Quebec versus solar PV and offshore wind. This is a dichotomy that is completely false. It's not one or the other. We need all of them and we need them all in volume and for different reasons.

What we don't need is to overturn 13 years of consensus that large-scale hydropower ought not to qualify for RPS and receive subsidies in the form of

Renewable Energy Certificates. Large hydro is a mature technology that is already competitive in the marketplace – to give it subsidies would amount to a windfall of billions of dollars to a Canadian state owned enterprise at the expense of Massachusetts ratepayers. This was a ridiculous idea when it was trotted out for political purposes during the election campaign, and it is ridiculous now. Indeed, the idea is so fringe that it was not even brought up, let alone debated, in the context of the Green Communities Act in 2008. Now, Hydro Quebec has publicly announced that it will pay to build a new transmission line to bring its power to the New England market, and that is proof that this low-emissions renewable energy will get here, without a giveaway of excess profit.

But why solar? Some might say, it's expensive; why should Massachusetts go big into solar, requiring electricity providers to buy a minimum amount of electricity from solar as a carve-out of the RPS requirement? I'll tell you why. If solar is going to become a large market in this country – and you and I all believe it is – we want to be a leader. Right now, we are capturing the entire value chain of solar here in Massachusetts. We have solar panel manufacturing at Evergreen Solar; installers based here like Nexamp, Alteris, and Broadway Electric and others that have come here like Borrego and SunRun; component manufacturers like Panel Claw – a remarkable MA company that is now the 3rd largest US supplier of commercial mounting brackets; and consumers large and small getting electricity from their roofs instead of the grid. We had none of that before Governor Patrick – just 3.5 MW installed when he took office and hardly anyone was making a living installing solar PV. Now, we have nearly 80 MW of solar installed or under contract; employment in solar manufacturing, installation, and services has nearly tripled; and our robust, competitive market is translating falling panel costs into sharply lower total installed costs, moving solar closer to grid parity and closer to the day it will no longer need subsidies at all. That's not happening in states that don't have strong programs to support solar. So, I repeat: if you think there will be a US solar market, we have every reason to grow this sector in Massachusetts.

A word about solar costs. I have read in the unhappy mutterings of some opponents of solar in MA that our solar credit program will costs billions upon billions of dollars. The only way that you can arrive at that sky-is-falling conclusion is if you believe two things. One, contrary to the manifest experience of the last three years, where solar component and installation costs have both fallen by roughly 50%, you believe that costs will abruptly stop coming down and remain static for the foreseeable future. I don't believe that and neither does Nobel Prize winning US Secretary of Energy Steven Chu, who projects solar hitting grid parity in markets like ours in five years. Two, you have to believe that all solar produced will be priced at the current ACP level – despite the manifest evidence that we lowered our solar rebate program

levels no less than four times since we started it in three years ago (going from $2 per watt installed to 75 cents per watt installed for the residential market). We are encouraged that market forces are delivering new solar projects at prices far below the ACP price today and we have every reason to expect this trend will continue if not accelerate as the market continues to grow. So, those who say our solar program will cost billions are willfully ignoring the facts, relevant experience and market conditions in order to make a disingenuous argument.

And in terms of offshore wind, the naysayers dwell on the wrong question – what is the cost of the first offshore wind farm to be built in the U.S. – instead of the right question – what does Massachusetts stand to gain from having the first offshore wind farm in the U.S. built here?

Once again, my expectation is that offshore wind will develop into a major new industry in the U.S. I base this on the scramble now taking place among Atlantic Coast governors – Republican and Democrat – for second place in the offshore wind race. From Maine to Virginia, states are pushing – much more aggressively than anything we have done in Massachusetts, by the way – for their own offshore wind projects, often through special-purpose legislation and rich state supports. New Jersey, for instance, under a conservative Republican Governor who signed it into law, has created an Offshore Wind REC, requiring its utilities to purchase the output of 1,100 MW of offshore wind capacity developed and interconnected into New Jersey. Such policies go far beyond any we have put in place for offshore wind in Massachusetts. I also base it on Secretary Salazar's active promotion of offshore wind, and on the U.S. Department of Energy's pursuit of an offshore wind strategic plan to address obstacles to the development of offshore wind and drive down its cost. We share that objective and as we move forward with additional offshore wind development in federal waters off of Massachusetts, the Commonwealth and its Clean Energy Center will make a multimillion dollar commitment to the applied R&D necessary to drive down the cost of offshore wind in the next 10 years.

The bottom line is offshore wind is coming and we have much to gain from it. But only one state can reap the particular economic benefits of being the first mover – and with Cape Wind going forward, it will be Massachusetts. In fact, we are seeing those benefits already. Siemens has opened its North American offshore wind headquarters in Boston, because of its contract to supply turbines for Cape Wind. In New Bedford, we will have the first port facility in the U.S. designed with the capabilities to support offshore wind installation, and it will host up to 1,000 jobs as Cape Wind is constructed. Mass Tank, a Middleboro-based steel pipe manufacturer, has joined forces with a leading European firm to supply Cape Wind with foundations and other structural steel components made in Massachusetts.

But let me come back to Hydro Quebec. Just because large hydro is not a new technology that needs support in the marketplace doesn't mean we are indifferent to its benefits. Governor Patrick and I have worked hard to facilitate the delivery of additional HydroQuebec resources to MA – including several direct discussions with the Quebec Premier and other officials. As we implement the Global Warming Solutions Act, we need to reduce greenhouse gas emissions by means other than RPS-eligible renewable energy. In the plan to meet the 2020 emissions-reduction mandate I soon set, I will propose for consideration a Clean Energy Standard, which would require electricity suppliers to increasingly favor low-emissions and no-emissions sources like hydro and nuclear power and even natural gas over coal and oil, in the mix of electricity delivered to their customers. That is the right way to continue to tip the scales toward all the cleaner options we have. We can send a signal that our market wants and needs additional low or zero emission power from non-RPS technologies. CA has been working on a preferred loading order meant to encourage dispatch of lower emissions resources – and there are ways to get at this. My point is we need to move forward to address this challenge; however, we don't need to upend our renewables market in order to do it.

Going forward, we are also looking to lead the nation on management of public energy. Under Governor Patrick's Leading By Example Executive Order, state agencies are already diligently working to reduce unnecessary energy use and greenhouse gas emissions. But we are looking to go much further through an initiative called Commonwealth Energy Solutions. This initiative consists of three parts:

1. **Procurement:** We will be tapping the benefits of competitive energy supply for all state, quasi-public, and ultimately municipal buyers of power.

2. **Comprehensive retrofits of public buildings.** We already have a $2 billion investment program on our own balance sheet, but we need to make every public building a model of energy efficiency and distributed generation.

3. **Comprehensive energy management.** With federal stimulus dollars, we have begun a nation-leading enterprise management system, utilizing local company EnerNOC.

This all adds up to Massachusetts becoming a state of the art public energy manager. Now, when this idea was floated before, there were some entities that expressed some misgivings. I say to them: You have nothing to fear. We are not seeking to turn the state into a utility, or to becoming a market participant. This is all about cost savings and emissions reduction in the public sector. You will be seeing this initiative coming forward, and I ask for your support.

We are starting to see the fruits of the historic 2008 legislative session that gave us the Green Communities Act and the Global Warming Solutions Act. But these landmark pieces of legislation did more than change rules to favor efficiency and renewables and reduce emissions, it established a set of new expectations for participants in our competitive energy market. Specifically, the Global Warming Solutions Act requires all state agencies, departments, boards, commissions and authorities to consider climate change impacts, such as greenhouse gas emissions, in issuing permits, licenses and other administrative approvals. We are already seeing this from MassDOT with its historic GreenDOT mandate that bakes greenhouse gas emissions reductions into its capital decisions in an unprecedented way. Show me any other state where its DEP has conformity review as to annual greenhouse gas emission from transportation investment. It is a remarkable achievement and shows but one example of the appropriately pervasive influence of the state's greenhouse gas law.

With electricity generation accounting for 28 percent of greenhouse gas emissions today, and with electrification of vehicles being seen as a way to free ourselves from foreign oil, approvals relative to how we make, deliver, and use electricity have significant climate change impacts. Indeed, reducing greenhouse gases will inevitably fall heavily on the electricity generating sector – and we need to be acting in a way that recognizes that.

This also suggests that, in the second restructuring, we should be expecting something more of the regulated utilities. The 1997 restructuring narrowed their responsibilities, by making them deliverers of electricity, not generators. Now is the time to broaden the mission of these electricity distributors, with their exclusive franchises, and to hold them accountable for that broader mission.

You know, historically, the first corporations created in this country, and in this Commonwealth, were all public service entities, and they were all monopolies – they had rights to do business that could not be taken away from them. Indeed, it was their monopoly status that carried with it an obligation to serve a public purpose. Now, our energy utilities are the last remaining monopolies – they have exclusive service territories where they alone can do business, and those rights cannot be infringed upon or taken away from them. And public service obligation they have in the post-1997 marketplace is clear – to provide safe, reasonably priced, reliable electric service.

But in the second restructuring, safety, price, and reliability are not enough. As the last remaining private monopolies, utilities need to be held accountable for their performance in relation to all public purposes. As I mentioned above, the Commonwealth has in 2008 given clarity and direction to a new and vitally important set of public purposes for the energy sector. As such, we need to take performance against their obligation to society, including our clean energy goals, into account in rate cases,

mergers, and other state approvals. As we move forward, we need to develop a robust set of incentives and penalties for performance against our clean energy and climate goals – it should grow to become a fundamental part of utility regulation in all aspects.

To be specific, in the case of mergers and other major transactions, we need new standard of review. Consolidation offers clear benefits to shareholders, but what benefits to the public? Even benefits to ratepayers are speculative at best, counting on operating efficiencies that may or may not translate into customer savings. It is not enough to protect against harm resulting from mergers, there must be guaranteed benefits to the public as a condition of allowing one monopoly to merge with another and create a vastly bigger monopoly. “No net harm” was a standard appropriate to the first restructuring; in the second, the standard must be “substantial net benefits.”

To apply this standard, we should be asking questions like these:

- Will a merger be good for our businesses?
- Will a merger provide rate relief for residential customers?
- Will a merger provide better storm response?

And to apply this standard relative to our clean energy and greenhouse gas mandates, we should be asking:

- Will a merger help advance the development of the Commonwealth’s solar and offshore wind resources?
- Will a merger improve and accelerate delivery of energy efficiency services?
- Will a merger make it easier for customers to deploy distributed generation?
- Will a merger make it easier for large-scale shifts toward new technologies when they arrive, like smart grid technologies and electric vehicles?

Put another way, if a merger simply creates a new entity that is bigger, richer, and in control of a larger service territory but uses that size, those resources, and a bigger footprint just to build big transmission projects it can then try to bake into its ratebase – does this serve the public purposes established in the Commonwealth’s laws? If not, why should the public allow it? Conversely, if merging utilities could demonstrate that they had outstanding track records in serving customers and advancing clean energy goals, and that their merger would put more resources into customer service, make energy efficiency services more effective, and ramp up

renewable energy on our roofs, on our hilltops, and in our waters – that should be cause for public celebration, as well as regulatory approval.

Let me note here that in all such matters Attorney General Martha Coakley, as statutory advocate for ratepayers, plays a vital and centrally important role. She has been a zealous and effective advocate in both rate cases and mergers. I fully expect she will take up this agenda of seeking the broadest possible public benefits from regulatory proceedings, and go further. I thank her for her good work to date, and I look forward to seeing what additional steps she will take in the future.

In conclusion, the challenge for the next four years is not to continue to implement the Green Communities Act's many provisions. That would be superlative from a national standpoint, but it is not sufficient. The next four years need to be about consolidation of the second restructuring – resisting and ignoring those who still wish to roll back the first restructuring or fight against the progress already made on the second restructuring. We need to move forward so that clean energy takes its rightful place as one of the calling cards of the Commonwealth of Massachusetts. It is a worthy challenge.

Governor Patrick has said many times, if we get clean energy right, the world will be our customer. It is happening, right before our eyes. Earlier this week, I convened a meeting of the CEOs of a couple dozen Massachusetts clean energy companies – and every one of those companies is growing. Companies like EnerNOC, a leader in demand response that is building out an exciting suite of energy management services and taking them across the country. Companies like Second Wind, which is manufacturing innovative wind measurement systems, and partnering with WindPole Ventures, another Massachusetts company, to establish a pilot wind measurement network in southeastern Massachusetts. TPI Composites, a leading manufacturer of wind turbine blades, is opening an R&D center in Fall River, in part to be in proximity to the Wind Turbine Testing Center now under construction in Charlestown, with support from U.S. Department of Energy. With help from the Massachusetts Clean Energy Center, Beacon Power, A123 Systems, and Premium Power are expanding their Massachusetts operations as they lead the way in innovations for electric vehicles, grid storage, and other energy storage needs. And Flo-Design, a company that has won awards and DOE funding for its innovative shrouded turbine design, has set up its corporate headquarters here, and will manufacture its first turbines here in Massachusetts.

That will be the fruit of the second restructuring of the electricity market in Massachusetts. The laws we have in place have given us the framework, but we are still learning how to use that framework to greatest effect – and to get us where we want to go. I can promise you that I will continue to work toward that goal in my new life in the

private sector. And I hope I can count on all of you to work with my worthy successor, Rick Sullivan, to realize Governor Patrick's clean energy vision.