



The miracles of science™

January 15, 2008

Kevin Kennedy, Chief
Program Evaluation Branch
Office of Climate Change
California Air Resources Board
1001 I Street
P.O. Box 2815
Sacramento, CA 95812

Government Affairs Manager, Western Region
1415 L Street, Suite #460
Sacramento, CA 95814
Phone: 916-443-5511
Fax: 916-443-3062
Cell: 916-261-1432
tom.jacob@usa.dupont.com

RE: POLICY MECHANISMS FOR AB 32 SCOPING PLAN EMISSION REDUCTIONS

Dear Mr. Kennedy:

On behalf of the DuPont Company, I am pleased to offer the following comments relating to policy options the State of California should consider in implementation of AB 32. These comments reiterate key points made in our submission of October 22, 2007, to the Board regarding their proposed Early Action Measures.

By way of introduction, let me note that DuPont has been a global leader in greenhouse gas emission reduction, having begun systematic reduction of emissions from our operations in 1991, and accomplishing over a 70% reduction on a global basis by 2004. We are proud of that record, but aware that such reductions reflect a unique mix of process and energy emissions that cannot be readily replicated by most companies or institutions.

Our leadership has propelled us into deep involvement with the evolution of climate change mitigation policy internationally and nationally. Based upon that involvement and our ongoing investment in multi-stakeholder initiatives such as the US Climate Action Partnership (www.us-cap.org), our view is that a combination of policy approaches will be required to take on the challenge of climate change – a mix of market mechanisms, complementary policies and measures such as building codes and standards, and voluntary actions. We also believe such policies are best driven at the national level and have played an active role in advancing a national agenda. We recognize the commitment that California has made, however, and believe the State can best serve as a national model by advancing an appropriate mix of policies at this level, with an eye toward integrating into a national framework at such time as a reasonable national program is put in place.

In the context of the above experience, we appreciate very much the efforts being put forward by ARB, in particular, in attempting to respond to the AB 32 mandates. We have noted, however, that those efforts have focused dominantly on advancing early action in the regulatory realm. That does have a place, but the comments below reflect our view that the most effective program would be one which advances complementary regulatory and market mechanisms, and respects and encourages voluntary initiatives.

CREDITING VOLUNTARY ACTIONS

We are pleased to see ARB's explicit attention to Voluntary Early Actions, and look forward to reviewing your policy statement. DuPont strongly supports Board (and where necessary, Legislative) action to enable crediting of such actions. This is necessary to provide incentive for voluntary action prior to regulation or emissions cap and to avoid competitively disadvantaging those actors who voluntarily reduced in the past. Such credit should be predicated on clear demonstration of actions taken to reduce GHG emissions and the resulting reductions, such as engineering records of specific projects. Recommendations of staff in the

October Early Action Report offer a start, by recognizing the need to establish a process for documenting and quantifying such actions. However, such documentation meets only part of the need. In the current environment companies must consider the possibility that early action to realize relatively cost effective opportunities for reductions may not be “creditable” in future regimes. This would deny them use of that “low-hanging fruit,” and push them further up the marginal cost curve for reductions that may be required in the future. A process crediting early voluntary action against potential future obligations will therefore be necessary to broadly liberate action in advance of regulatory implementation.

THE NEED TO ACCELERATE DEVELOPMENT OF MARKET MECHANISMS

DuPont is very concerned that the sequencing evolving in California -- focusing first on driving regulatory action and later attending to development of a market mechanism – limits the potential stimulus for innovation and threatens to deliver lower GHG reduction for the dollars invested than might otherwise be achieved. A mix of regulatory and market tools will ultimately be required to make real progress against greenhouse gas emissions. Early development of a market mechanism, such as cap-and-trade, can complement regulatory initiatives. In fact, we see that as many as 19 of the Early Action items approved by the Board in October could logically be enabled by such a mechanism, with the advantage of broadening incentives for innovation throughout the economy (listed below).

Development of the market mechanism should be accelerated and items potentially amenable to that mechanism should be evaluated with an eye toward elaborating those elements necessary to prime them for treatment in a carbon market. The pressure to drive regulatory mandates is understandable, given the State's historic reliance upon and expertise in pollution regulation, and the prominence of early regulatory action in AB 32. However, climate change poses a challenge that implicates not only a handful of major emitters, but the entire economy. The targets of 2020 established by AB 32 – ambitious though they are – are but the beginning of what will have to be much deeper and broader reductions in GHG emissions. Stabilization of greenhouse gases at a level that minimizes anthropogenic contribution to climate change will require driving net GHG emission reductions of 60-80% from current levels by 2050. It is in this longer-term context that two necessary priorities come into focus:

- 1) **Need to generate incentives for innovation in reducing GHG loadings broadly across the entire economy:** There is clearly a tendency to lay the current anthropogenic contribution to GHG loadings at the doorstep of industry. However there are several other major emitting sectors of the economy where emissions reductions will be necessary. Across the spectrum of developed nations, the trends in GHG emissions since 1990 from major sources – industry, residential/commercial and transportation – have consistently shown the industrial emissions to be flat-to-declining, while emissions associated with the transportation and residential/commercial arenas are increasing, in some cases dramatically. This is not surprising, as energy – the primary source of all these emissions – has been a major cost of production for most manufacturing since the Arab oil embargos of the 1970's. Industry has been consistently reducing energy consumption per unit of output for decades.

The problem is really much broader – it is the increasing energy consumption of our lifestyles. The critical challenge is to induce similar attention to and innovation around those broader frontiers of our lifestyle. California has done more than most states or nations in driving and delivering energy efficiency across the broader economy. Ironically, that success makes the challenge of driving far more GHG reductions even greater -- this economy has already taken much of its “low-hanging fruit” and been driven further up the marginal-cost curve. Incremental improvements necessary to deliver even more reductions are likely to cost the California economy more than other states. The AB 32 implementation plan must ignite a much stronger drive toward innovation across the economy, not just continue to drive emissions reductions from major manufacturing.

- 2) **Need to ensure the most GHG reductions per dollar invested:** It is certainly true that the transition to a low-carbon economy will create many opportunities. Indeed, DuPont, as a company that has transformed itself to focus its energies on science and innovation, anticipates playing a major role in that transition. However, the economic challenge of transitioning the entire economy away from our conventional uses of fossil fuels is huge and will necessarily be accompanied by economic dislocation. At the same time, economic vitality will be critical to stimulating investment in innovation that will deliver the tools of that transition and the diffusion of those tools rapidly and globally. This argues strongly that we must ensure the most cost-effective use of that capital which we commit to climate change transition – we must ensure that we get the most GHG reduction per dollar invested.

Shortcomings of the Early Action recommendations: The emphasis on driving regulatory mandates that is built into AB 32 and reinforced by the October Early Action Report falls short on both of the above needs. The Report illustrates the inherent limitations of the regulatory approach. Unfortunately, there is **no broad incentive to innovate under this approach**. The inventory of recommendations, itself, is limited. Its focus is naturally on those arenas in which the ARB already has some experience and expertise. While these regulations may well spur innovation, it would extend only to these few arenas. If this approach were to dictate the path toward the long-term climate response, it would place upon ARB the incredible burden of identifying and regulating every opportunity for GHG reduction across the entire economy, and driving them to action either by regulatory mandates or artificial (and fiscally burdensome) incentives. It is simply not sustainable as a path forward in addressing the pervasive challenge of reigning-in greenhouse gas emissions. We must find a way of tapping into the innovative nature of the private sector to drive technology development that will stimulate emissions reductions across the entire economy.

In addition, the relative cost-effectiveness of the various items suggested for early action in the October Report varies tremendously – from tens of dollars per ton reduced to hundreds of dollars. Importantly, for many of the items the cost-effectiveness (and therefore potential economic drag) associated with the suggested items could not be estimated. Advancing regulations in this circumstance inherently **fails to assure that dollars are directed to those opportunities that yield the highest rate of GHG reduction**.

How a functioning market could help: A well-designed system capping emissions and enabling trading, and the resultant “market” for carbon reductions, would be directly responsive to the imperatives of broadly stimulating innovation and delivering GHG emission reduction that is cost-effective. Enabling emissions trading would allow institutions (industries, public agencies, etc.) facing emission reduction imperatives but with relatively high costs for achieving these reductions to seek out and invest in reductions at other institutions that have identified lower costs for achieving that level of reduction. This transaction creates both an incentive for capital to flow to the opportunities for the highest reduction yield and a tangible market value for finding and delivering lower cost reductions. It thus provides that broad incentive to “build the better mousetrap” and capture a market share of that cost of carbon reductions.

In the October actions, the inventory of measures includes a significant number that may well be amenable to such a market system – measures that could be “induced” to deliver real, verifiable reductions, and thus have the potential to become early entrants in a fledgling carbon market – a tangible invitation to innovate in GHG reduction. They vary in cost-effectiveness and thus could benefit from a sequencing (prioritization) by such a market, based upon actual relative costs (even for those items for which ARB could not determine economic impacts). The following are 19 of the Early Action items that would likely be enticed into development and delivered as reductions at some price under such a system, without need for a series of narrow-focused regulatory mandates or State subsidies:

- Landfill methane recapture
- Refrigerant recovery
- methane, etc from oil & gas
- truck efficiency
- cool paints
- green ports
- truck stop electrification
- wafflemat systems
- electrification of airport and other ORV equipment

- hybridization of medium/heavy duty vehicles
- Cement energy efficiency
- Blended cements
- energy saving measures for pre-'80 power plants
- refinery energy saving measures
- methane capture from dairies
- phaseout of pre-'80 power plants
- SF6 reductions
- PFC reductions
- foam recover

These items are all of a character that a functioning market establishing a price for carbon reductions could be expected to lure development and investment. To be sure, a number of these items would, in current thinking around a California program, fall under the umbrella of “offsets” – reductions achieved outside the umbrella of the primary GHG emitters that have been the focus of much discussion during the course of AB 32 implementation. This warrants particular attention.

The critical role of “offsets” and the challenge of verification: The logistics of managing a cap on emissions for many suggests a focus of reduction mandates “upstream” – at points of entry of energy or other greenhouse gases into the economy, with the implications of that filtering down through the economy. While that may have some economic appeal, its impact on incentives to innovate broadly across the economy is indirect, at best. Enabling any verifiable GHG reduction to be credited against an overall emission reduction target (such as California’s 2020 target) can ignite innovation much more broadly and much more directly. A key question, however, is verification. Managing a “downstream” emission reduction program can be daunting, and the challenge of assuring the environmental integrity of reductions which are allowed to be credited against an overall State target can also loom large. Ironically, the very fact that the above are itemized by ARB staff for consideration as regulatory targets suggest that these can be readily verified as creditable reductions – whether in response to direct emission caps or as “offsets” eligible to be purchased on the market by and credited to those bearing reduction caps. If understanding and data are sufficient to consider an item for regulatory control, they are certainly sufficient to verify the character and magnitude of reductions. A process for such verification would have to evolve and satisfy all parties with its rigor. Any functioning market depends upon assurance of the integrity of the “medium of exchange” – in this case, the carbon-equivalent GHG reduction credits. The above inventory illustrates that there are actions out there that can meet this test. A market – rather than a mere inventory of regulatory actions – would surely surface many more opportunities for reduction that have comparable capacity for verification.

We urge your consideration of these comments and look forward to working with ARB staff and the other agencies of the Climate Action Team as AB 32 implementation advances. Please don’t hesitate to contact us if you have any questions about the above.

Sincerely,

(transmitted via email)

Thomas R. Jacob
Government Affairs Manager, Western Region

cc: C. Shulock, ARB
A. Ayala, ARB
R. Corey, ARB
J. Costantino, ARB
R. Heim