Recent EPA Rulemakings Relating to Boilers, Cement Manufacturing Plants, and Utilities

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Thank you Mr. Chairman and members of the Committee for your invitation to address an important subject, the wave of environmental regulations directed at electric generating units, and specifically about the Electric Generating Unit Maximum Achievable Control Technology (EGU MACT) proposal now pending at EPA. There is probably no more important set of issues because they affect the environment, the availability of reliable, affordable electricity and the economy… each of which is absolutely critical to our future.

I think we can all agree that we must continue the tremendous progress we have made in protecting the environment. We can also agree that electricity is the lifeblood of our economy. We only have to think back to the blackout of 2003 to remember how nearly everything comes to a sudden halt without it. And we can agree that if electricity becomes unaffordable it will hamstring our economy. I have long believed, however, that economic growth and environmental progress are not mutually exclusive. That is the thrust of my comments this morning.

Environmental Progress to Date

I am not here to suggest that we should not continue to make environmental progress. But the MACT rule and the other regulations now being considered by EPA have to be placed in the context of the tremendous progress we have made and continue to make in improving the environment. We have no intention, as some might suggest, of stopping that progress. Unfortunately, some give the impression that rapid adoption is necessary because environmental progress is reversing or has stopped.

Let me take a few moments to review one of the great environmental success stories of all time. In the 1960's and 70's, we truly had deteriorating air quality. But with the foresight of visionaries like my friend Chairman Dingell, the Clean Air Act was adopted in 1970 and significantly amended in 1990. As a result of this historic piece of legislation, our industry and others have made monumental progress in cleaning the air in our country. In particular, at my own company, DTE Energy, over the last 35 years we have reduced particulate emissions by over 90 percent and sulfur dioxide and nitrogen oxide by more than 70 percent. We did this while increasing generation by approximately 45 percent. Other electric utilities have accomplished similar results.

We first focused on the ambient air in the vicinity of the facilities and drove down particulate and sulfur dioxide emissions in the 1970’s and 1980’s. With the amendments to the Clean Air Act in 1990, we focused even more on sulfur dioxide

emissions to address acid rain. In the late 1990's and continuing into the new millennium, we focused on regional impacts, achieving tremendous reductions in nitrogen oxides and even more reductions in sulfur dioxide, addressing ozone and fine particulates. Emission reductions have continued over the last decade. Since 1999, emissions of all of these pollutants in aggregate have declined across Michigan as a result of Clean Air Act programs. Nitrogen oxide and sulfur dioxide emissions have decreased 33 percent and fine particulate more than 40 percent since 1999 from all emission sources in Michigan. The bulk of these reductions are due to the investments that Michigan utilities have made in pollution control technologies in response to Clean Air Act requirements. The ambient air quality has improved significantly. As a result, Southeast Michigan now meets current National Ambient Air Quality Standards for ozone and fine particulate.

The Clean Air Act has served us well and enabled us to achieve great emission reductions and significant improvements in the environment. It has done so while protecting and enhancing the economy. Innovative features -- such as the ability to bank and trade sulfur dioxide allowances under the Acid Rain program, which was developed in cooperation with the Environmental Defense Fund -- resulted in achieving the Act's goals at costs that were far below expectations. The Act also adopted reasonable time frames for implementation that did not unnecessarily drive up costs or jeopardize the reliability of the electric system. Thus, the key to success of any environmental initiative is in managing the timing and using a common sense approach to achieving improvements.

Let me re-emphasize: there is more to accomplish, but we are only requesting that the management approaches and reasonable timing applied in the past be applied in this new wave of regulations.

If we ignore the lessons of the past, we risk stalling our economic recovery. In Detroit, we are particularly mindful of the urgency of getting our economy back on track and getting people back to work. Times of great challenges are also times of great opportunity. Congress must ensure in those times we properly balance the strategic importance of energy with the appropriate pace and cadence of environmental improvements.

Wave of Environmental Regulations

I know that today's focus is the EGU MACT, but it is essential to note that it is only one of many environmental regulatory proposals focused on the electric industry. As an industry, we have said this before, we face a potential regulatory "train wreck." We use that term because we believe with the right policy decisions we can keep the train on the track while continuing to achieve great progress – in terms of the environment, energy and the economy. Without the right policy, we could be headed for disaster.

We are an industry that must plan at least a decade ahead and think many decades ahead. When a decision is made to build a power plant today, that decision will have

implications well into the second half of this century. In my state, today's fleet of power plants has an average age of roughly 50 years. When those decisions were being made, no one had ever heard of global warming, there was plenty of cheap oil to fuel power plants as well as cars, there were hardly any nuclear plants, and natural gas was flared at the wellhead because of limited transportation infrastructure. In the intervening half century, events have yanked energy policy in many directions. Fortunately one of our industry's pole stars has been the need to diversify our fuel supplies. While short-term events naturally move us in different directions, we cannot abandon viable generation assets too abruptly. Unfortunately, that principle is more easily stated than followed. In the late 1970's and into the 1980's, following Three Mile Island and with the economic downturn, the industry acquiesced in the face of numbing public fear and increased regulatory demands and turned away from nuclear energy. We slowed building any new coal units. As a nation, we even banned the use of natural gas as a boiler fuel in the Fuel Use Act of 1978. Facing high interest rates for new plant construction, we focused on maintaining existing coal units, many of which were built in the 1950's and 1960's. This resulted in older units operating longer than many had predicted.

When the economy rebounded in the 1990's, the demand for reliable, affordable power also increased. Policy and economics pointed the industry toward natural gas-fired units, which were no longer prohibited. And while these plants have attractive environmental characteristics, the demand for natural gas led to spikes in natural gas prices. When prices spiked, those brand new gas fired plants were priced out of the

market -- no one could afford their electricity. Many of them have sat idle for the better part of a decade.

We are now at another crossroad. The economic recovery, while still fragile, is starting to get some traction and will lead to renewed demand for power. This demand growth will run headlong into our common desire to push for continued significant emission reductions, and the desire to address additional environmental concerns and renewed sensitivity to nuclear power. It is vital that we remember that a diverse supply of energy has served us well in the past and will be equally important in the future to maintain our energy security and maintain competiveness in the marketplace. We need to continue to drive energy efficiency to the extent practicable. We need to continue to promote the development of renewable energy sources. We need to learn the lessons of Fukushima, but America must continue to move forward with our nuclear energy plans. We need to be able to utilize coal, our most abundant fuel, better and cleaner than anyone in the world, because coal will be used by others for a long time to generate electricity. We also need to include natural gas as a significant player in our electricity future as we develop the abundant reserves of shale gas.

Because electricity is essential to our quality of life, we must be an industry that is totally focused on meeting our customers' needs for affordable and 100 percent reliable electricity. We must not let the current wave of environmental regulations focused on electricity generation -- the transport rule, the EGU MACT, cooling water intake (or 316b) regulations, coal ash regulations, and climate change -- to prematurely shut down

coal generation, without a clear transition strategy, and in some cases with little or no corresponding environmental benefit. We are especially concerned about the narrow compliance window associated with some of these regulations, particularly the EGU MACT. We believe it will result in more short-term thinking and approaches that will cost our customers much more in both the near and long term. This is a result that we know our customers in Detroit cannot afford.

Although most of the regulations are not yet final, our analysis and that of many others show that the regulations will drive Detroit Edison and many companies in the Midwest and Southeast to retire up to 20-30 percent of our existing coal fired capacity over a short period of time. This will result in job losses and reduced tax base for many communities. When plants are rushed into retirement, jobs disappear. When plants are rushed into retirement, local tax base shrinks. This will come at a time when many communities across the country – but especially in the Midwest and Southeast – are continuing to struggle with high unemployment and declining local tax revenues.

Utilities in Michigan and other states are driving significant energy efficiency gains and increasing our generation from renewable sources, but we believe much of the base-load generation that replaces retiring coal facilities will need to be natural gas-fired.

We are concerned that a rapid escalation in demand for natural gas-fired electricity generation could drive another natural gas price spike. This is something we know our electric and natural gas customers in Detroit simply cannot afford.

While shale gas has significantly expanded our natural gas reserves, history tells us that natural gas prices will, in fact, spike in the face of increased demand. Given the time delay in conducting new drilling and the challenge of building new pipeline infrastructure, we rarely have an exact match of supply and demand. Moreover, we know from history that there are no silver bullets in the energy field. Nuclear was going to be too cheap to meter. We were the Saudi Arabia of coal, oil was less than $10/ barrel. Shale gas, while a tremendous new resource, will likely be slowed by concerns about drilling and infrastructure development. Let's not put all our eggs in that basket. Over the long term, we believe that the natural gas supply system will be better able to manage this increase in the use of natural gas for electricity generation. It would be an economic mistake to rush that day by artificially abandoning coal resources. I am not asking to back away from the environmental progress that the regulations are intended to achieve. Rather, I am advocating an approach that minimizes the financial impact on our customers, many of whom are still struggling with the effects of the Great Recession.

Our commitment to environmental progress is demonstrated by what we've done and what we are doing. We have and are partnering with our customers to drive energy efficiency. DTE Energy has invested $1.7 billion on state-of-the-art emissions control equipment at our Monroe Power Plant. We're investing hundreds of millions dollars more in additional controls at that facility and other plants in our fleet. We recently announced an $800 million upgrade at the Ludington, Michigan, Pumped Storage

facility that we co-own with Consumers Energy. We're on a path to spend up to $2 billion on clean, renewable, wind energy farms in our state. In a state with the economic challenges we face in Michigan, these are huge investments. We know there is more to do, but we must pace these investments that our customers must finance.

I know there are some who argue that this wave of regulations can drive new industry and create many jobs. That may well be true in the future, but we know with certainty it will eliminate real jobs today and inflate wholesale power prices, driving up costs for many. We are at a time of transition and transformation in the electric industry. We recognize it. This committee recognizes it, as evidenced by its interest in examining the benefits of new-generation nuclear power plants, R&D into carbon-capture and storage technology, and the continued development of our country's renewable energy resources.

It is not an easy balance to achieve, but I believe it can be done because we've done it before. Congress can and should act to adopt policies that balance continued environmental progress with minimizing adverse economic impacts on businesses and households struggling to pay their bills.

EGU MACT Specific

Let me now shift to a few EGU MACT specific comments. First, we believe that providing only a 60-day comment period for such a complex rule, one that will have far-reaching economic and energy supply impacts, is totally inappropriate.

The duration of the comment period appears to be driven solely by an arbitrary court settlement date to which the EPA voluntarily agreed. Those of us with the most at stake and the best sense for the impacts on customers had absolutely no input on the timing issue. This date required the rule to be proposed while emissions data collected over the previous year and submitted to EPA was still being evaluated and analyzed. Less complex proposed regulations with significantly less potential impact have received significantly more time for EPA analysis and public input.

Additionally, the goal of completing these regulations by November of this year seems equally outrageous and arbitrary. If the response to EPA's Industrial Boiler MACT and early response to the EGU MACT is any indication, EPA will receive an enormous amount of public comment which will deserve EPA's serious consideration and evaluation. It is not credible to expect that EPA can effectively evaluate substantial public comments, make appropriate revisions to the proposed rule, and issue a reasoned and appropriate final rule by November. We are very supportive of continuing the environmental progress we have made in this country. We just ask that the progress be balanced with the need to promote the economic recovery and take care of our struggling customers.

We have been talking about regulating hazardous air pollutants for electric generating units for some time and EPA's past record has indicated that the only significant hazardous air pollutant of concern from power plants was mercury. In fact, many

states, including Michigan, already have promulgated regulations directed at reducing mercury emissions from electric generating units and we have plans and equipment under construction to meet this requirement. This is not the case for the other hazardous air pollutants that the EPA has chosen to regulate at this time – acid gases, non-mercury metals, and organics, that require pollution control equipment beyond what is needed to reduce mercury emissions. The extremely short time frames and the extremely stringent emission limits and control technology requirements make this rule particularly burdensome to us and our customers. This is particularly troublesome because there is scant evidence that health concerns have prompted the need for regulating these emissions. It appears that almost all of the benefit assigned to these proposed regulations is associated with expected reductions in particulate emissions, something regulated by other parts of the Clean Air Act, most specifically the Transport Rule and particulate matter national ambient air quality standard, which was last tightened in 2006 and which will be further tightened next year.

The EPA is proceeding with these EGU MACT regulations under the mistaken belief that it is quite easy to control these emissions. For example, it has staked its estimate of minimal early plant retirements on their belief of the industry's ability to meet the acid gas limits with the application of dry sorbent injection (DSI). It appears that the EPA makes this determination based on one three-week trial test. Interestingly, the company that reported on this study states that they "recommend completing a trial to understand the system, fuel, and pollutants interaction." In other words, there is much testing that is

necessary to determine where and to what extent this technology will help meet the standards.

I cannot think of any business that would be willing to invest the required hundreds of millions – perhaps billions – of dollars on the basis of a three-week trial. With this sparse data, it is impossible to assess the effectiveness of DSI across all types of fuels and boiler designs. This will require significant unit-specific testing to determine its broader viability.

Based on its minimal and insufficient information, the EPA projects the early retirement of 10 GW of capacity. It is expected, however, that many of these units will need to install wet flue gas desulfurization (FGD) to meet these emission standards. If that is the case, other studies show that early generation retirements will be in the 25-80 GW range. Given the short comment period, it's almost impossible to test whose hypothesis is right.

This is particularly troubling since this is supposed to be a technology-based rule. The EPA has chosen not to make use of a provision in the existing Clean Air Act that allows them to utilize a health-based standard rather than a technology standard. They claim that there is not enough information or time to utilize the health-based standard. Isn't that one of the very issues at hand? Just because reduction technologies may be available, which we don't concede, why spend money just because it might have some benefit. How wise is it to subject an industry so critical to America's way of life, its

standard of living, and its economic vitality to billions of dollars of additional costs because the regulating agency does not choose to the take the time to produce a more reasonable approach? In fact, if EPA were willing to take the time to analyze the appropriate data, EPA's own analysis shows that acid gas emissions from coal-fired power plants do not result in exceedances of any Reference concentration established by EPA or the Electric Power Research Institute (EPRI). EPRI has modeled every coal-fired power plant's acid gas emissions and provided the EPA with adequate factual information to set an alternative health-based standard. This approach could reduce the financial impact on the customers while also assuring their protection.

As indicated earlier, it is also interesting that the EPA appears to attribute almost all of the expected health and environment benefits of this proposal to expected reductions in fine particulates (PM 2.5), a criteria pollutant which is managed by other provisions in the Clean Air Act, not to the reduction in hazardous air pollutants. Put another way, EPA's own analysis appears to conclude that the EGU MACT offers only minimal, at best, health-based benefits from reducing the hazardous air pollutants it is supposed to address, such as mercury and acid gases.

While we and others will submit detailed comments on this proposal, let me finish with some observations on the operation of our units during startup and shutdown and how these regulations will drive expenditures beyond what should be necessary. The EPA proposes to require emissions that occur during startup, shutdown and malfunction to be included in meeting these proposed standards. The emission standards were

established using data collected under steady-state conditions, when the emission control equipment is designed to operate optimally. Although we have tremendous operators, under conditions of startup, shutdown and malfunction, the applicable control equipment does not, by design, operate at its maximum performance.

The result of this overly stringent approach is to effectively establish a more stringent limit than appears in the regulations, because operators must over-comply during normal operations to “make up” for the higher emissions that will undoubtedly occur during startup, shutdown and malfunction. A work practice standard applied during plant startup and shutdown, specific to the unit’s boiler type and control equipment, would be more appropriate. Again, we need to use some common sense.

Finally, the proposed emission limits for new coal plants are so strict as to be below the ability of monitors to measure such concentrations and beyond the ability of control technologies to reduce the emissions as required. Even if CCS is proven, these MACT limits for new coal plants might eliminate the possibility of new coal plants.

Possible Solutions

Whether a conscious decision or not, this wave of regulations in general and the stringency of the EGU MACT in particular will have the impact of driving companies to retire many of their older, coal-fired units. This initiative has the potential to impact struggling regions of the country, such as Michigan and the Midwest, more severely

than other regions that rely less on coal-fired generation. It is imperative that Congress cushion the impact on customers in these regions while still assuring the ultimate outcome in reductions of hazardous and other air pollutants.

This can be achieved by implementing a process that allows companies and communities more time to plan for the potential loss in generation capacity, the resulting loss of tax revenues, and the potential impact on community services. The three years or less that is provided for in the EGU MACT proposal is not designed to address these sorts of outcomes. Time is valuable.

Several options could be considered that would produce more rational outcomes. For example, utilities could be granted the flexibility to retire a unit by a date certain, possibly ten years, and exempt that unit from new regulations (but still required to meet existing regulations and thus not allowed to backtrack). The benefits of such an approach include minimizing the customer impact from both financial and reliability concerns. It would also provide better certainty in the planning process that should be occurring in the industry. And, it would assure 100 percent emission reductions from units that commit to retire by a date certain.

For units not retiring – those essential to continue supplying the needed electricity – it is recommended that Congress and the Administration consider limiting or adequately pacing emission control equipment requirements. For example, mercury reductions are already being planned and could continue to be required by the 2015-16 time period. It

is recommended that the EPA adopt a provision that is included in the Michigan mercury rules that requires no further mercury reductions for units equipped with a selective catalytic reduction (SCR) unit and a flue gas desulfurization (FGD) unit in combination. This encourages greater reduction in nitrogen oxides and sulfur dioxide emissions and likely similar reductions in mercury without burdening our customers with significant additional cost for incremental benefit.

Congress could also allow companies to plan control equipment installations by dates certain but spread the financial impact on our customers over a more reasonable time. For example, it could require 50 percent of the remaining generation to be controlled by 2015, 75 percent by 2018, and 100 percent by 2020.

For acid gases, Congress could mandate EPA to allow units the ability to demonstrate that they are meeting a health based standard rather than a technology driven standard based on a far from proven process. As stated earlier, this opportunity is already provided for in the Clean Air Act and supported with existing data, but not allowed in the proposal.

Regarding the non-mercury metals, Congress could require EPA to make the EGU MACT more consistent with the Industrial Boiler MACT and demonstrate compliance by meeting a filterable particulate standard, which is directly measured by existing continuous emission monitoring equipment, rather than a total particulate standard. It

appears that this provision is not necessary to demonstrate reductions of the non-mercury metals.

Finally, it is recommended that compliance with the non-mercury metal limits be based only on demonstrating compliance with the specified particulate limit, 0.03 pounds/MMBtu and eliminate the provision that limits would be lowered if the actual operational results were lower. It appears that this penalizes greater reduction efficiencies of particulate control equipment and only drives greater costs to our customers.

Conclusion

To conclude, I want to emphasize that my message today is not “Do nothing.” I firmly believe that progress on the environment needs to continue. But it needs to continue in a rational way. It needs to continue at a pace that can be efficiently and cost-effectively managed. It needs to be continued in way that provides measurable environmental and health benefits while not jeopardizing the economy. And it needs to be in a way that preserves a balanced mix of generation technologies that has served us well in the past and will continue to serve us well in the future.

Thank you.