

Executive Summary

Public Act (PA) 141 of 2000 restructured Michigan's electric market in an attempt to bring customer choice and electric supply competition to Michigan. Under PA 141, alternate electric suppliers (AESs) are free to offer electric service¹ at the retail level, but with no obligation to serve customers beyond the length of a contract. Regulated utilities, however, continue to be regulated under PA 141 and, as such, maintain the obligation to serve any choice customers that decide to return to the utility. In other words, Michigan has a hybrid market structure—part regulated and part unregulated. According to a previous study by Public Sector Consultants (PSC), this hybrid structure has created an economically unsustainable system for both producers and consumers of electricity in Michigan.

On April 6, 2006, Governor Jennifer Granholm issued Executive Directive 2006-2, which directed the Chairman of the Michigan Public Service Commission (MPSC) to prepare an electric energy plan for the State of Michigan. This directive came on the heels of the *Capacity Needs Forum Report* of January 3, 2006, which concluded that Michigan requires additional electric supply to meet its needs beginning in the year 2009. The final *Michigan's 21st Century Electric Energy Plan* (the Plan) concludes, as did the earlier *Capacity Needs Forum Report*, that Michigan needs additional electric supply. The Plan proposes to meet this need by establishing an energy efficiency program, creating a mandatory renewable portfolio standard, and ensuring that a new base load coal plant is operational no later than 2015.

Given that a major component of the Plan is the construction of at least one new base load power plant by 2015—and that lack of customer predictability caused by Michigan's hybrid model is the major reason cited by utilities for not proceeding with the construction of new base load generation in Michigan—PSC was retained by the Michigan Municipal Electric Association and Protect Michigan to analyze whether Michigan's current hybrid structure accommodates the goals and initiatives of *Michigan's 21st Century Electric Energy Plan*. If the hybrid structure will not allow Michigan to implement the goals of the Plan as written, PSC was further charged with analyzing whether Michigan would be better served by making the Plan's proposed changes to PA 141 or by returning to a more traditional regulatory model.

Stated more plainly, this study addresses the fundamental energy question facing the state: **If *Michigan's 21st Century Electric Energy Plan* accurately portrays the goals toward which Michigan's electric industry should be moving, what type of market structure would enable the stakeholders to best reach those goals?**

MAJOR FINDINGS

New Base Load Generation

- The Plan's call for a renewable portfolio standard and energy efficiency program reduces, but does not eliminate, the need for new base load generation in Michigan.
- Base load generation is unlikely to be built either by regulated electric utilities or by independent power producers (IPPs) under Michigan's hybrid retail electric market structure. The primary reasons are lack of retail revenue predictability for regulated utilities, and lack of wholesale revenue predictability for IPPs.

¹ AESs sell to retail customers power that the AES purchases wholesale from a utility or an independent power producer (IPP).

- The current energy plan debate has focused almost exclusively on policy changes that are required in order to develop **new** base load power plants. As these policy options are examined, it is equally important to recognize the crucial role that Michigan's **existing** generation base plays in ensuring both reliable and affordable electric supply for all customers. Policy options enacted to encourage new generation, but that would create significant and artificial distinctions between new and existing generation, do not serve Michigan's interests.
- Providing additional retail revenue predictability in Michigan will require major changes to the electric choice program.
- Looking across the nation, other states also are having difficulty constructing new generation plants, and some states are incurring large increases in electricity rates. In response, some other states and regional transmission organizations are adopting new policies to provide additional regulatory and revenue certainty in order to encourage development of new base load generation.

Renewable Portfolio Standards

- Independent estimates of expected rate increases in other states show that while the median increase in consumer electric bills is only \$0.38 per month, there is substantial variation above and below this median. Therefore, although renewable portfolio standards (RPSs) differ greatly from state to state, it is not clear from a national review that Michigan's proposed RPS will greatly increase retail electricity rates.
- Since the effect of an RPS on Michigan's rates is unclear and there is an increasing possibility of a federal carbon tax in coming years, creating meaningful comparisons between the cost of base load and renewable sources of energy across multiple future years is extremely difficult. Michigan therefore needs to carefully consider which goal has the highest priority—price stability (which means that the state achieves the 10 percent RPS standard recommended by the Plan, but may not do so by the 2015 timeline) or the stated RPS goal (which means that the state will pay all of the necessary costs, regardless of the price tag, to be certain that Michigan achieves a 10 percent RPS by 2015).
- If Michigan cannot achieve the RPS standard outlined in the Plan—and if electricity demand increases as expected—an additional base load plant may be needed. In this case, Michigan is likely to rely more heavily on a volatile wholesale market until the new base load plant comes online.

Energy Efficiency

- The size of Michigan's proposed energy efficiency (EE) program would place it at the forefront of states across the nation in terms of available program dollars. This will be accomplished with a modest increase of retail rates that averages only \$0.50 per month.
- Although EE will cause electric rates to increase, rates are not likely to increase as much for the proposed EE program as they would to construct two additional base load plants offset by the EE gains. The impact of the rate increase affects customers differently, however; those who implement EE will see the total utility cost stay the same or decrease, while customers that do not implement EE will see their total utility costs increase to pay for EE for other customers. To the state, the savings from the proposed EE program are substantial: the equivalent of two base load power plants by 2015.

CONCLUSIONS

- *Michigan's 21st Century Electric Energy Plan* is not an *à la carte* set of options; if the new generation, RPS, and EE programs are not enacted in concert there could be significant consequences. For example, if the state misses its RPS or EE targets, as many as **three** additional base load plants may be needed by 2015. Focusing a policy discussion on any **one** of these three goals of the Plan—at the expense of the other two goals—does not secure Michigan's electric energy future.
- To build new base load generation, Michigan faces a trade-off. On one hand, with either the state's existing hybrid structure or a move to increase choice (i.e., full deregulation), Michigan faces the risk that a new base load plant will not be built prior to 2015—therefore delaying the economic development and electric reliability benefits of the new plant—due to financial decisions of both utilities and IPPs in a market with uncertain multiyear revenue streams. On the other hand, if Michigan modifies PA 141 or moves toward re-regulation, the state increases the possibility that at least one base load plant will be built. Either of these two market structures also increases the possibility that there will be a change to the choice program that could include its elimination.
- While generation is clearly the area that is **most** affected by market structure, the market structure also will affect the state's ability to implement and to achieve the Plan's RPS and EE goals. Broadly stated, both the RPS and EE programs proposed by the Plan can be implemented—albeit with differing degrees of success—in any of the market structures examined by this study. However, a fully deregulated market structure—where all producers are risking customer loads to a choice model—is likely to **increase** the cost of implementation of RPS and EE plans. A fully deregulated market structure would also **decrease** the state's chances to reach the RPS and EE targets since (a) any producer's time horizon will be much shorter than under a fully regulated model, and (b) in markets with more uncertain parameters, the premium demanded by producers increases.
- Given the uncertainty of larger, macro risks in electricity production such as rising fuel prices, rising construction costs for new base load plants (due to both new technologies and increased demand for raw materials used in power plant production), and a possible federal carbon tax, **Michigan should choose the regulatory and market model that best stabilizes Michigan's electric market and diversifies its electric production portfolio.** By reducing risks to both producers and consumers, Michigan stands the best chance of implementing the Plan.
- **The best risk-reduction strategy is to return to a regulated utility model for new and existing generation in order to bring greater predictability to the revenue base of all utilities.** It will be extremely difficult for Michigan to successfully implement *Michigan's 21st Century Electric Energy Plan* without moving to a model where costs of new generation, renewable technologies, and energy efficiency programs are not at risk for recovery for three reasons:
 - Costs to implement elements of each major component are so high that waiting for the market signals to react means that Michigan also will likely wait too long for the market to provide timely solutions.
 - Michigan's existing hybrid structure, let alone a move toward full deregulation, makes decisions to commit to multiyear, capital-intensive projects less likely. While it is possible for an electricity producer to successfully supply new generating power in the hybrid or deregulated model, it is unlikely that an existing provider will want to be the first one to try without seeking long-term purchase contracts (which provide greater predictability to the producer).

- The additional risks (or the same risks but with greater probability or volatility) of the hybrid or deregulated market may cause investors to demand higher risk premiums, leading to higher costs of financing to any company—utility or IPP—that seeks to construct a new base load power plant.