DTE Energy®

# House Bill 5194: Utility Regulated Return on Equity

House Energy Policy Committee

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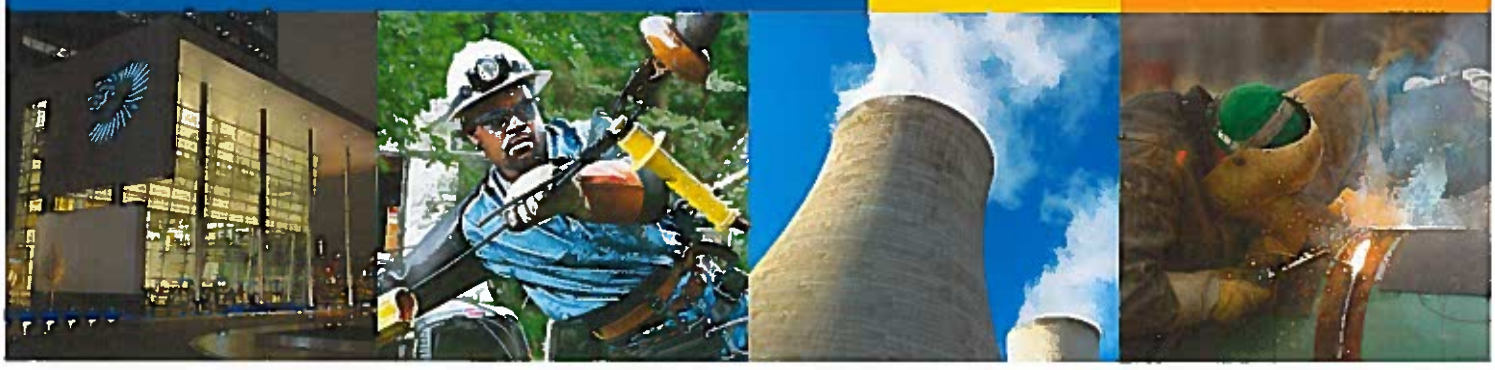
**Ed Solomon**
**Assistant Treasurer & Director of Corporate Finance**



Good morning, Chairman Glenn, Vice-Chair Hauck, and Vice-Chair Lasinski. My name is Ed Solomon, and I am the Assistant Treasurer and the Director of Corporate Finance for DTE Energy.

Thank you for the opportunity to testify on House Bill 5194 and for taking the time to dive into energy policy issues. The utility industry is complex and vital to our quality of life and economy, so dedicating time to these discussions is important.

At a high level the bill before you today, would set Michigan's utility regulated return on equity, or ROE, on a national average basis, trigger additional rate cases if earned ROE's exceed allowed ROE's by twenty basis points (or 0.2%) and require any over earning to be refunded to customers.

We do not agree with any of these measures, and believe these moves would be poorly received by the equity and capital markets, and end up being costlier to Michigan's utility customers. Primary reasons for this are as follows:

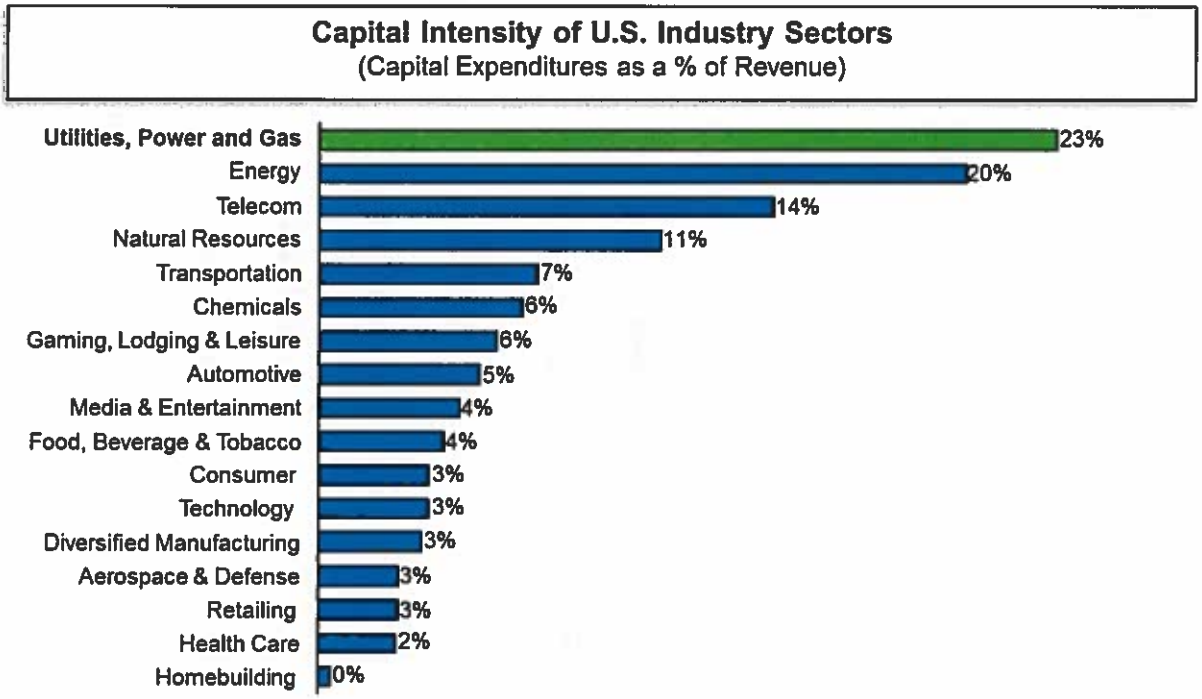
- It creates a construct where the risks are asymmetric and on average we would earn a below average ROE
- As averages are always dated, using a 12 month national averages creates a lag in what is currently needed for moving forward with investments
- This approach overlooks our utility specific risks and capital needs
- To maintain our credit ratings, we would need to increase our equity capitalization offsetting any perceived benefit in rates
- The combination of these drivers risk dis-incentivizing investment in energy infrastructure

In my testimony today I will address the following topics:

- What is a regulated return on equity and why do utilities have this?
- What is the impact of a regulated return on equity on Michigan?
- How is a regulated ROE set today at the MPSC? What factors are considered?

At a very high level, for industries that are capital intensive and serve the public, a regulated return on equity is authorized to finance investment in the infrastructure necessary to meet customers' demands and needs. It is not a guaranteed profit, but instead, the return and the regulatory compact, must provide a fair opportunity for the utility to earn its cost of capital and compensate investors for the risks they are taking. This is necessary to attract and make investments in critical infrastructure while fulfilling the obligation to serve all customers in their service territory with that infrastructure. I have included excerpts from testimony from Dr. Michael Vilbert from the Brattle Group that defines the cost of capital and why it is important in greater detail.

The utility sector is the most capital intensive industry in the country. Assets that are built serve customers for decades, sometimes half a century.[1]



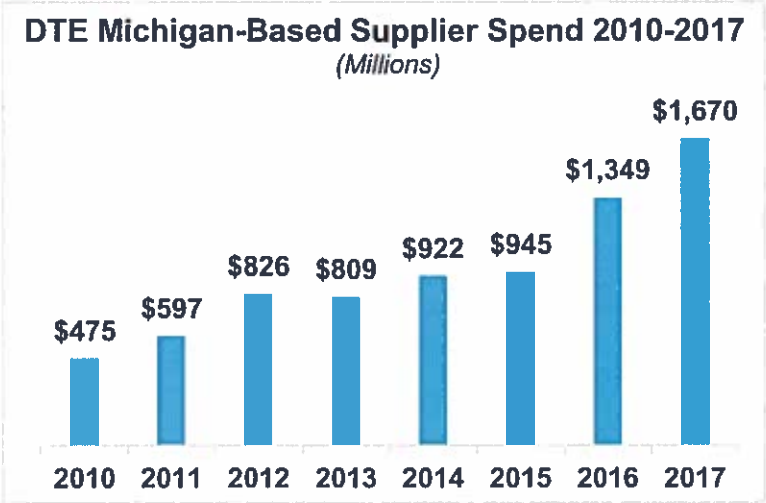

Making sure that the right financing mechanisms are in place for those long-term investments is important for a stable energy landscape for customers in Michigan.

So what is the impact of a regulated rate of return? Simply put, investments in DTE Electric and DTE Gas are invested in Michigan to serve our Michigan electric and gas customers.

It is power plants in Monroe that power nearly 4,500 megawatts of Michigan's homes and businesses, including our state's auto, steel, and industrial material manufacturing sector. It is the substation and distribution line that delivers that power to your home. It is the pipeline that moves natural gas to heat our homes and businesses. We may not always think about or see it, but that infrastructure investment takes a significant commitment and long-term financing.

[1] Source: Fitch Ratings, "Corporate Capex Study; Growth Stalls in 2013," October 25, 2012

These dollars are invested in the state and in local businesses. DTE was one of the first business partners to join Governor Snyder's Michigan Business Connect program to drive local investments in Michigan. Since 2010, we have invested over $7.6 billion with 3,000 Michigan businesses. These investments reach 75 counties, creating nearly 16,000 new jobs, in addition to the nearly 10,000 DTE employees here in the state. We have committed to investing $5 billion in Michigan over the next 5 years.




So what factors determine a regulated ROE? How is it set and what is the process of setting it?

There are many factors that go into setting a return on equity, including the cost of capital and various forms of risk. In short, the ROE is set to mitigate risks and recover the cost of capital to maintain a stable environment for customers. There are many considerations that go into calculating ROE, which I have detailed in the appendix. However, in the interest of time I will walk through 3, primarily those that classify DTE as a "higher average risk", which drives our current ROE.

First, the economy we serve is largely homogenous and is closely tied to the success of the auto manufacturing. When the auto manufacturing sector faces challenges, all businesses that support it are impacted, including energy. This is something that Michigan knows well. As an example of just how closely we are tied to Michigan's economy, during the 2008 financial crisis, DTE Electric lost 25% of its electric demand in the manufacturing sector. As an investor looking at infrastructure in Michigan, this would be a concern that would need to be addressed through the ROE.

Under our obligation to serve, we make infrastructure investments for all of our customers, no matter what their income level or financial situation may be. Customers in our service territory have faced, and in many cases still face, challenging economic situations. But they still need electricity and natural gas for their homes. We are sensitive to the needs of our customers and provide assistance and payment programs to help address affordability challenges. A healthy ROE helps us to continue attracting investments into Michigan for customers, ultimately creating jobs, improving infrastructure, and meeting our customer needs.

Third, the infrastructure used to power Michigan in our service territory are older. Much of that infrastructure is in the process of being replaced over the next decade, but until it is phased out, it still carries risk of needing maintenance, not all of which is easily predictable. To adequately maintain affordability for customers, it makes sense to continue operating existing assets for as long as possible, extending the life of that asset through maintenance investments. So while existing infrastructure is cheaper over time than new infrastructure, it carries risks that need to be mitigated.

Given all of this, we believe the process of evaluating and setting a regulated return on equity should remain with the Michigan Public Service Commission. The process for setting a regulated return on equity is complex, rigorous and established through a litigated contested case process. These are transparent and open cases where third-party experts, intervenors, and stakeholders may – and do – come to the table to challenge and

weigh in on factors considered in its development. Every utility is assessed on a case-by-case basis. Averaging all the utilities together is not consistent with nationwide practices and oversimplifies a complicated assessment that may result in reduced investments in Michigan.

I thank you again for your time and welcome any questions you may have.

## II. COST OF CAPITAL THEORY

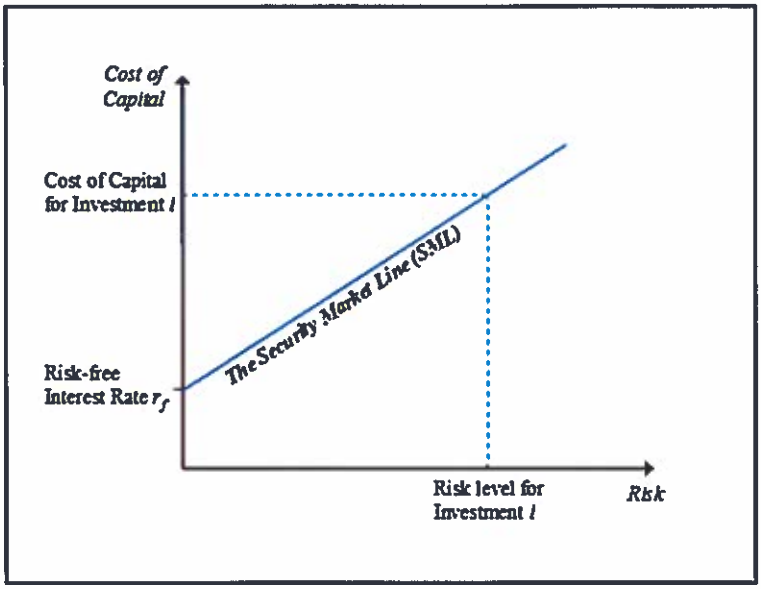
### A. Cost of Capital and Risk

**Q15. How is the "cost of capital" formally defined?**

A15. The cost of capital is defined as the expected rate of return in capital markets on alternative investments of equivalent risk. In other words, it is the rate of return investors require based on the risk-return alternatives available in competitive capital markets. The cost of capital is a type of opportunity cost: it represents the rate of return that investors could expect to earn elsewhere without bearing more risk. "Expected" is used in the statistical sense: the mean of the distribution of possible outcomes. The terms "expect" and "expected," as in the definition of the cost of capital itself, refer to the probability-weighted average over all possible outcomes.

The definition of the cost of capital recognizes a tradeoff between risk and return that can be represented by the "security market risk-return line" or "Security Market Line" for short. This line is depicted in **Figure 1**. The higher the risk, the higher the cost of capital required.

**Figure 1**
**The Security Market Line**



**Q16. Why is the cost of capital relevant in rate regulation?**

A16. It has become routine in U.S. rate regulation to accept the "cost of capital" as the right expected rate of return on utility investments.[2] That practice is viewed as consistent with the U.S. Supreme Court's opinions in Bluefield Water Works & Improvement Co. v. Public Service Commission of West Virginia, 262 U.S. 679 (1923), and Federal Power Commission v. Hope Natural Gas Co., 320 U.S. 591 (1944).

From an economic perspective, rate levels that give investors a fair opportunity to earn the cost of capital are the lowest levels that compensate investors for the risks they bear. Over the long run, an expected return above the cost of capital makes customers overpay for service. Regulatory commissions normally try to prevent such outcomes unless there are offsetting benefits (e.g., from incentive regulation that reduces future costs). At the same time, an expected return below the cost of capital does a disservice not just to investors but, importantly, to customers as well. Such a return denies the company the ability to attract capital, to maintain its financial integrity, and to expect a return commensurate with that of other enterprises attended by corresponding risks and uncertainties.

More important for customers, however, are the broader economic consequences of providing an inadequate return to the company's investors. In the short run, deviations from the expected rate of return on the rate base from the cost of capital may seemingly create a "zero-sum game"—investors gain if customers are overcharged, and customers gain if investors are shortchanged. But in fact, in the short run, such actions may adversely affect the utility's ability to provide stable and favorable rates because some potential efficiency investments may be delayed or because the company is forced to file more frequent rate cases. Moreover, in the long run, inadequate returns are likely to cost customers—and society generally—far more than may be saved in the short run. Inadequate returns lead to inadequate investment, whether for maintenance or for new plant and equipment. Without access to investor capital, the company may be forced to forgo opportunities to maintain, upgrade, and expand its systems and facilities in ways that decrease long run costs. Indeed, the cost to consumers of an undercapitalized industry can be far greater than any short-run gains from shortfalls in the cost of capital. This is especially true in capital-intensive industries (such as the electric utility industry), which feature systems that take a long time to decay. Such long-lived infrastructure assets cannot be repaired or replaced overnight, because of the time necessary to plan and construct the facilities. Thus, it is in the customers' interest not only to make sure

[2] A formal link between the cost of capital as defined by financial economics and the right expected rate of return for utilities is set forth by Stewart C. Myers, *Application of Finance Theory to Public Utility Rate Cases, Bell Journal of Economics & Management Science* 3:58-97 (1972).

the return investors expect does not exceed the cost of capital, but also to make sure that the return does not fall short of the cost of capital. In fact, research has shown that there is a positive correlation between allowed ROEs from the regulators and customer satisfaction ratings.[3] In other words, the customers of utilities in more supportive regulatory environments have higher satisfaction in the quality of service.

Of course, the cost of capital cannot be estimated with perfect certainty, and other aspects of the way the revenue requirement is set may mean investors expect to earn more or less than the cost of capital, even if the allowed rate of return equals the cost of capital exactly. However, a commission that sets rates so investors expect to earn the cost of capital on average treats both customers and investors fairly, and acts in the long-run interests of both groups.

3 Barclay's Research, "North America Power & Utilities: March Preview/February Review," February 17, 2017.

# Appendix B: ROE Utility Specific Risk Factors

## DTE Gas Company U-18999

- Financial and Business Risk
- Low demand growth / falling gas consumption
- No full weather normalization adjustment typical to other LDC's = unrecovery of costs
- Revenue Risks – Rate Design sales not equal to actual sales
- End User Transportation Revenue risk of Interstate pipeline bypass
- Volumetric focused rated design for fixed costs recovery leads to recovery risk
- Michigan reliance on auto industry / steel industry and City of Detroit = lagging economy
- Higher than average unemployment and federal poverty levels
- Population decline in service territory plus required to services diminishing neighborhoods
- Declining sales
- All above increases downside risk
- Supportive or non- supportive regulatory environment

## DTE Electric Company U-18255

- Financial and Business Risk
- Must do comparison to comparable size utilities in the same general geographic area
- Comparable: Revenues, Market Cap., Regulatory Assets, Net Plant, Credit Ratings, LT Growth Estimates
- Signs of financial distress, dividends or dividend cuts, Regulator Assets, M&A activity Financial
- Low demand growth / falling or flat consumption
- Revenue Decoupling Mechanism = No
- Revenue Risks – Rate Design sales not equal to actual sales
- 10% Choice Option in Michigan erodes sales
- Volumetric focused rated design for fixed costs leads to recovery risk
- Michigan reliance on auto industry / steel industry and City of Detroit = lagging economy
- Higher than average unemployment and federal poverty levels
- Population decline in service territory plus required to services diminishing neighborhoods
- Declining sales
- Taking over service formally provided by PLD including infrastructure improvements
- Generation risks: Aging power plants, retirements of coal plants, unique nuclear plant risks
- All above increases downside risk
- Supportive or non- supportive regulatory environment