

# Energy Challenges in Wisconsin: Energy Use, Development and Infrastructure

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## Summary Statement

Wisconsin's economic future is in jeopardy. There is agreement the most pressing concern among regulators and energy companies is the energy shortage in Wisconsin and the U. S. The facts are evident:

- There is increasing demand for power.
- Generation has not kept up with the demand.
- Aging power plants must be updated or replaced.
- There is a growing emphasis on natural gas as a fuel source.
- There are inadequate transmission and distribution lines.

As the demand for more power grows by a rate of three percent each year, the state is facing a power gap of 4,000 megawatts during this decade.

Wisconsin's energy companies have responded to this looming crisis by proposing solutions to address the growing need for more power. Energy companies have mapped out plans to upgrade aging power plants, build new plants and improve the inadequate transmission and distribution lines. However, the present structure of the energy industry hampers their ability to secure the multi-billion dollar capital investments required to improve the states energy situation.

The Public Service Commission of Wisconsin and the state legislature play a critical role in the process. Parts of the energy industry must be restructured. Those decisions must occur in a timely manner.

Uncertainty is not an option. If we do nothing or take too much time to act, it will put us farther behind and raise the prospect of higher energy costs.

As plans are reviewed, there's a need to focus on the most effective and least costly solutions that provide the reliable service necessary to continue the economic growth and prosperity we've enjoyed over the past two decades. The Wisconsin solution can and should come from Wisconsin's energy companies. After all, state based energy companies logically have a natural commitment to Wisconsin consumers and business.

The state of Wisconsin is at an energy crossroads. The economic stability of our state depends largely upon the direction in which we proceed. If we do not take action now, the economy will be in jeopardy.

There are massive changes occurring around us...just look to the west. What California recently went through can serve as a learning experience for the rest of us. The Wall Street Journal recognized this is a recent editorial. It stated the result of deregulation will not only be a more efficient, responsive industry with lower prices, but one in which investors-not-taxpayers bear risks. We cannot afford to ignore the changes. If we put our heads in the sand, we become victims.

Fortunately, we have this knowledge. The Public Service Commission of Wisconsin (PSCW) developed a Strategic Energy Assessment Report to guide our state into a more stable energy future. The Commission's report offers an excellent two-year energy needs forecast. If all assumptions in the document occur, Wisconsin will have sufficient energy through 2002. This is good news. However, a longer-term look presents a much more difficult picture.

Currently, Wisconsin is in much better shape than a few years ago. The state is still very competitive. Rates are lower than the national average and among the lowest in the Midwest.

Our present energy supply is in good shape. There was a 20 percent reserve margin for the past summer, which was much better than we've had in many years. Yet, there were concerns in other parts of the country, which can impact us.

Reliability 2000 was developed through a consensus of the Legislature to help energy companies, businesses, and consumer groups address immediate needs. These

needs include new generation development, energy company improvements to existing systems, and the creation of an independent transmission system.

What about beyond the year 2002? The warning signs are in front of us. Wisconsin's energy demand is growing by 350 megawatts per year. Our limited import capabilities will compound the issue. And, we have aging plants.

One thousand megawatts generated in our state come from plants that are more than 50-years-old. The Point Beach and Kewaunee Nuclear Plants must be re-licensed or retired in the next 12 years. Environmental limits are getting tighter.

The bottom line is, we cannot afford to be complacent. The demand for electricity is soaring. If we do not take action, our economic growth is in jeopardy.

Twenty years ago the nation's electric power grid generated up to 30 percent more electricity than was needed. By 2005, the national excess supply could fall below 10 percent.

The reality is that the existing long-distance transmission grids are sagging under increased loads. Local distribution systems are overtaxed and electric conservation efforts are virtually extinct.

Wisconsin is not alone in its concern about energy issues. There has been much discussion and coverage of California, which has been beset by electricity shortages this past year. California readied for blackouts after running precariously low on power six times within the last year.

The power shortages sent California's rates skyrocketing. State regulators capped prices after prices more than doubled. And what most disturbed California's utility executives and regulators was that the crisis came even though none of the state's power

plants or transmission lines had failed. The electric industry reached the “ragged edge” of failure.

The issues can be traced back to the early 1990’s, with deregulation looming and Southern California stuck in a recession. This is when utilities stopped building new plants. Not one plant has been built in California for more than a decade.

As a result, California’s future doesn’t look bright. The supply crisis will not ease anytime soon, according to the state’s energy commission. In spite of the stress on the electrical system, a record for demand has not yet occurred. Evidence shows the real crisis is coming. Other states, whose own needs are escalating, will soon have less power to sell to California.

Because of this energy crisis, California is keeping a close eye on the United Kingdom, which is experiencing a similar energy crunch. To help solve its energy demands, the U.K. has decided to trade its electric power on independent futures and spot markets. When this occurs, California will be watching. California regulators are hoping to learn from Britain’s auction-pool system, which should result in increased competition and lower prices.

In the meantime, several United States Senators want to accelerate the deregulation process in hopes of increasing competition and lowering prices throughout the nation. These senators would like to require all states to deregulate their electric power monopolies by 2002.

But such deregulation, if unplanned and uncoordinated, can end badly. Many utilities are failing to spend money on much-needed systems maintenance because they are uncertain who will be responsible for utility maintenance in the unregulated

marketplace. As a result, analysts forecast major power failures within the next five years in the Northeast and Midwest, caused, in part, by deregulation. Wisconsin is among the states that most likely will be affected by these blackouts.

Additionally, three nationwide grids will limit large power flows from region to region under deregulation, according to analysts. Under deregulation, utilities in 25 states – each with their own rules – would create a patchwork of transmission systems, each unable to work with the other.

Another example of the state of energy is the condition of our nation's military bases. More than 100 bases have utilities out for bid, because their infrastructure is crumbling. This year, Fort Hamilton awarded the Enron Corporation a \$26-million contract to upgrade its utilities.

Nationally, we are also witnessing the acceleration of mergers. The Florida Power and Light and Entergy merger has formed the largest U.S. utility. It proves the continued consolidation among electric utilities in the U.S. is again in full swing. When all is said and done, there likely will be a relatively small number of power companies remaining in our country.

There is a dangerous strain on the electricity supply. Supply and demand was referred to as “gloom and doom” in one newspaper headline. The buffer of surplus electricity has been whittled by 60 percent within the last 10 years. Electricity demand has increased by two to three percent a year, while production has lagged. The safety cushion of generating capacity is far below what it was a decade ago.

In Wisconsin, new transmission systems have not been built to handle the increasing levels of imported energy. We need an additional 4,000 megawatts of

generating capacity in the next five to 10 years. Constructing new generation plants, upgrading existing plants, and enhancing the transmission and distribution systems will cost five to 10 billion dollars. Unless we support this additional infrastructure, Wisconsin will find itself revisiting California's recent experience.

Appropriate action needs to be taken in our state. State Senator Roger Breske recently said we must facilitate the development of a competitive generation market. We must create a level playing field in which existing Wisconsin-based energy companies – not as regulated utilities – can compete with Independent Power Producers (IPP's).

We want to provide opportunities for Wisconsin-based energy companies to use existing generation assets and capabilities to survive in this new business environment, without endangering customer's access to current low-cost electricity.

The proposed generation in Wisconsin is adding up. Fifteen gas plants and three coal plants have been proposed. Wisconsin's major utilities, including Alliant, Northern States Power of Wisconsin (NSP), Wisconsin Energy (WE), and Wisconsin Public Service (WPS) are stepping up. WE has announced a \$6 billion plan to build and renovate power plants and improve the delivery system. NSP has a plan to improve transmission. WPS has unveiled a plan to deregulate the industry, and Alliant has filed a federal lawsuit challenging state investment regulations. Various IPP's have announced proposals as well.

The PSCW plays a critical role in meeting the energy needs and solutions of our state. It is imperative that the PSCW approves the proposed new generation plants in a timely manner. As Robert LaFollette stated when the Commission was established, the PSCW should remain independent and free of influence by political interests. It is

unfortunate that the Commission has been attacked in the last year by environmental groups. It is my hope that those groups don't deter the Commission from doing its job and helping to create solutions for the state's energy needs.

At the same time, we need national energy goals to provide us with a broader vision. Federal legislation would create more competition, which would lower costs and improve economic efficiency. The economy would be stimulated.

National energy goals can be outlined in a comprehensive national energy policy, which addresses electricity and natural gas concurrently. We need to ensure sufficient capacity levels are met, reliability is adequate, consumers have choices, prices are appropriate, the technology is neutral, incentives are provided for innovation and efficiency, and preference is given to competition over monopoly.

While the proposed solutions cannot be accomplished today, decisions must be well thought out, yet made in a timely manner. Wisconsin solutions must be based upon ten key objectives. They are:

1. Encourage Congress to address issues that help to promote competition and move the restructuring process forward;
2. Establish a regulatory reform package that is a model for low-cost states;
3. Develop an enlightened regulatory approach that removes barriers to Wisconsin-based utility holding companies to grow inside and outside the state, resulting in economic and environmental benefits;
4. Commit to a schedule that leads to appropriate changes in regulation to offer the options that meet the needs of all customers. A unified business voice is vital in saying energy competition is good and needed now;

5. Wisconsin needs to see its utilities back in the top quarter percentile when it comes to financial performance;
6. Establish more realistic rate setting for energy companies;
7. Develop an environment that invites and enables Wisconsin-headquartered utility holding companies to invest in new generation facilities in our state;
8. There is a need for more than 3,000 mw of new generating capacity, at a cost of \$5-10 billion in the next decade. Additionally, we must move forward faster with needed transmission and distribution expansion and enhancements;
9. Complete itemization of energy bills to enable customers to identify the costs that are covered through their monthly rates; and
10. End or reduce subsidies and taxes paid by energy consumers for non-utility services, such as interveners and public benefits. This may account for approximately 25 percent of consumer costs. We need to move forward faster on the transmission and distribution expansions and enhancements.

We read articles every day regarding the evolving energy situation. They point to the need for federal legislation. Immediate action must be taken on the transmission system. According to U.S. Energy Secretary Bill Richardson, “America is a superpower, but it’s got the grid of a Third World nation.”

Without action, the economic health of our nation remains at risk. If we do not address soaring prices nationally and spot shortages that result in higher prices locally, our economy will become more volatile. Certainly, we can learn from the California

experience. The market does work. An appropriate form of regulation is necessary, while ensuring we have an adequate energy supply.

An adequate supply will result when investors are offered incentives for funding essential changes and improvements in our distribution, transmission and generation operations. We want to encourage everyone to be able to build by creating an open playing field. We must develop an environment that enables Wisconsin-headquartered utility holding companies to build new generation facilities here. We must create a business-friendly regulatory environment that addresses the legitimate needs of business, industry and commerce. Wisconsin lags only in financial return for its utilities, which otherwise rank high in reliability and service. Another key component is diversification with our power plants. We need nuclear, fossil, coal, and natural gas plants. Natural gas cannot be ignored. It is a crucial piece in the energy reliability puzzle and should not be relegated to a second rate billing. A diverse, competitive market is needed to meet growing demands. It will provide the energy needed to fuel the planned electrical generation plants. Competition will also move the restructuring process along.

Ultimately, our state and federal legislators must commit to a schedule that leads to the appropriate changes in regulation, offers options that balance the needs of all consumers, and allows for sufficient energy supplies to address our growing needs.

Finally, a summary of five key points:

1. Wisconsin is still a low-cost state for energy. Solutions must ensure that Wisconsin continues to offer low-cost energy.
2. We must create a business-friendly regulatory environment to address the legitimate needs of business, industry and commerce.
3. The Public Service Commission must be free of outside influence and persevere to make timely decisions on pending plans.
4. Uncertainty is not an option. A decision on the Wisconsin plan must be made within six months.
5. The Wisconsin solution must be the most effective and least costly solution that continues economic growth and prosperity.

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## **Biography**

Eric Schenker is Dean and Professor Emeritus of the University of Wisconsin-Milwaukee School of Business Administration. His career at UWM spans 38 years, including serving as dean of the Business School from 1976 to 1997. Under Dr. Schenker's leadership, the School has become recognized as a major metropolitan business school of national distinction. Led by Dr. Schenker, the School has progressed steadily in its goals of developing talented management personnel, advancing knowledge to solve management problems, and helping the business community to apply this knowledge.

Dr. Schenker's research interests in regulated industries and industrial organizations have led to international recognition of his expertise. He has served on the Governor's Council of Economic Advisors for two Wisconsin Governors, and served on numerous corporate boards. Dr. Schenker is the author of a number of journal articles related to public utilities and state regulatory agencies. He is the author or co-author of six books, 16 monographs, and 41 journal articles.