Testimony of Todd M. Raba
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Thank you, Mr. Chairman and Senator Grassley for the opportunity to testify today. I am Todd Raba, President of MidAmerican Energy Company (MEC). MidAmerican is based in Des Moines, Iowa. We are Iowa's largest electric and natural gas distribution utility and also serve retail customers in Illinois, South Dakota and Nebraska.

Our corporate parent, MidAmerican Energy Holdings Company (MEHC), is one of the largest owners and developers of renewable energy resources in the United States and throughout the world. As head of our Iowa-based utility, I am extremely proud that MEC is number one in the nation in the ownership of wind-powered electric generation among regulated utilities, with 695.5 megawatts of wind facilities in operation, under construction or under contract in Iowa. In addition, we are aggressively seeking additional opportunities to develop wind projects. Working cooperatively with our state government, regulators, consumer advocates, industrial customers, and the environmental community, we've helped make Iowa the third-largest generator of wind energy in the country.

Our sister utility, Portland, Oregon-based PacifiCorp, has acquired 400 megawatts of wind energy in the last year and has committed to acquiring another 1,000 megawatts of renewable capacity by 2015. MEHC's independent generation development company, CalEnergy, also owns and operates 340 megawatts of emissions-free, baseload geothermal energy in Southern California with the potential to produce as much as 2,000 additional megawatts of baseload power.

At MEC, we are extremely pleased with the performance of our wind assets, which have exceeded our expectations in terms of performance. During last summer's July heat wave that led to the United States setting all-time records in electricity usage, our wind projects in North Central and Northwest Iowa made critical contributions to meeting our customers' needs and enabling us to help other utilities meet their requirements through wholesale sales.

Opportunities and Challenges in Renewable Development

Wind and other renewable sources of energy possess distinct advantages and disadvantages compared to conventional sources of electric generation. In terms of advantages, once installed, these resources face no fuel price volatility and in many areas are comparatively easy to site. Renewables are, of course, emissions-free, an important consideration in a world increasingly concerned with the potential impacts of global climate change.

On the other hand, unlike conventional fossil fuel or nuclear power plants, wind energy is not dispatchable, and the areas where it can be deployed economically are geographically limited. Utilities must provide power to consumers whether the wind is blowing or not, requiring us to back up wind power with dispatchable generation resources. Baseload renewables such as geothermal and incremental hydro are dispatchable, but they have high capital costs and geographic limitations. Our Imperial Valley geothermal power plants, for example, lie in one of the most physically remote and economically underdeveloped parts of the state, surrounded by mountains to the east, the Salton Sea to the north, the Anza Borrego State Park to the west and Mexico to the south.

Overall, however, we believe renewable energy has a bright future and should become a core component of the United States' electric generation mix. This future depends on actions you can take here in Washington to support the long-term development of a robust, domestic renewable electricity industry.

Simply put, two elements are required to assure the role of renewable electricity in the United States' energy future: certainty on financial incentives and development of a robust electric transmission grid with policies focused on the special challenges of delivering renewables from their often remote locations to load centers.

Given their high up-front costs, wind and other renewables are not yet fully cost-competitive with fossil resources. However, the Section 45 production tax credit, or PTC, closes this gap and makes these resources viable investments. None of the wind investments that MidAmerican has made in the last five years would have occurred without the PTC.

MidAmerican's Experience with the Expiration of the Section 45 PTC

In fact, in late 2003, we announced our intention to build a 323-megawatt wind project, but the pending expiration of the production tax credit forced us to delay moving forward with installation of the turbines. When the PTC expired on December 31, 2003, our project was frozen in place. We moved forward with what we could – site preparation and transmission upgrades -- but could not risk final acquisition and installation of the turbines without the PTC being restored in the tax code. The project would not have met the regulatory requirements of the Iowa Utility Board in terms of cost without the then-1.8 cents per kilowatt hour credit the PTC then provided.

Fortunately, or maybe I should say thankfully, then-Chairman Grassley and Chairman Baucus successfully led the effort to restore the tax credit in late September of 2004. MidAmerican and our project contractors moved immediately to install as many turbines as possible, and by the end of the year had placed more than 150 megawatts of power in service. When I say by the end of the year, that's exactly what I mean. The Northwest Iowa Clipper project was completed at roughly 6:00 p.m., New Year's Eve, further reducing costs by allowing us to take advantage of accelerated tax depreciation provisions that expired at the stroke of midnight that year.

The State of Renewable Energy Development in the U.S. Today

Since then, Congress has stepped forward twice to extend the Section 45 PTC, first through the Energy Policy Act of 2005 and then in last year's extenders bill. This has led to an unprecedented boom in U.S. wind development, but demand for turbines is far exceeding available world supply. Wind turbine prices have nearly doubled in the last three years, largely as a result of this scarcity.

Manufacturers tell us that the certainty of incentives in Europe make that market preferable to the U.S. for both manufacturing and long-term customer relationships. In order for wind energy to reach its full potential in the United States and substantially contribute to lower greenhouse gas emissions and fuel diversity, Congress must make a longer term commitment.

With regard to geothermal, hydro, biomass and waste-to-energy generation, the problem is more acute. While these resources are more geographically limited than wind, they function as dispatchable, baseload resources, enhancing their value. Drilling new geothermal wells or upgrading existing hydro facilities to create incremental power expansions is highly capital intensive. The vast majority of these projects cannot be completed within the short placed-in-service time frames under the existing PTC legislation, thus severely limiting new investments.

MidAmerican has suggested that Congress consider allowing flexibility with regard to placed-in-service dates for projects involving baseload renewables. We believe this could be done at little budget cost if the law allows projects under construction and with output contracts in place to opt in to tax treatment that reduce the ten-year application of the PTC by a length of time equivalent to the period between date of expiration of the placed-in-service date and the completion of the project. In other words, if a project was brought on line six months after the expiration of the placed-in-service date, it could choose to receive the tax credit for only nine and one-half years instead of ten.

The better answer, though, would be a five- or ten-year extension of the PTC that would provide long-term certainty to utilities, independent project developers and manufacturers while solving the base load renewable issue. We believe it would effectively redistribute the PTC's benefits from manufacturers to end-use customers. In the real world, there would be no additional cost to the Treasury from one ten-year extension as opposed to five two-year extensions. We understand the challenge Congress faces with regard to budget rules, but at the same time, we will not be able to cost effectively achieve the goals sought by Congress and requirements of an increasing number of states without a long-term commitment to renewable energy.

One way to address concerns of some members of Congress regarding the increasing budget costs of future extensions of the PTC would be to couple a long-term extension with a gradual phase-down of the credit back to its original 1.5 cents per kilowatt hour. MidAmerican has included this proposal in a broader outline of policy and technology

measures designed to address global climate change. I have attached a copy of this broader proposal for your review.

Unique Challenges of Bringing Renewable Energy to Market

When looking for a location to place a conventional fossil electric generating plant, developers primarily look at three factors: 1) a fuel transportation network, either rail for coal or natural gas pipeline; 2) a water supply; and 3) access to the bulk transmission grid. The closer these plants can be located to population and load centers, the better. Bulk power flows on to the grid in highly economical fashion, hundreds of megawatts at a time.

Renewables are different. For the most part, we cannot choose where to locate them. Nature has done this for us. Unfortunately, nature chose to test our creativity in making use of these resources.

A quick look at the attached maps of wind and geothermal-friendly locations in the United States shows an almost perfect inverse correlation between renewable potential and population distribution. As the map of summer wind energy capacity demonstrates, this situation is even more striking during the peak load period for most of the country.

Combining the remote location of most of our renewable potential with the diffuse nature of these resources, transmission becomes a disproportionately larger component of the retail cost compared to conventional resources. This situation will only grow more pronounced as we increase the amount of renewable generation, because the most cost-effective locations have already been developed.

Our Iowa wind projects provide an instructive example. The first 460 megawatts of wind that MidAmerican owns and operates required about $7 million in transmission upgrades (transmission lines and substation transformers). That translates into about $15.25 per kilowatt installed. The next 75 megawatts that we develop will require about $12 million in upgrades or about $160 per kilowatt installed – a more than ten-fold increase. All these sites are located in Iowa, which is both more densely populated and closer to the industrial load centers of the Midwest than the areas of vast wind potential in the Dakotas and further west. For those areas, the cost of transmission as a component of delivered energy will be even higher.

Sustain Policies Designed to Facilitate Investment in Transmission

Congress took a number of constructive actions in the 2005 Energy Policy Act to facilitate transmission investment. You reduced the depreciation schedule for electric transmission from 20 years to 15. The law established National Interest Electric Transmission Corridors to facilitate siting and coordination within the federal agencies. You provided for limited backstop transmission siting authority at the Federal Energy Regulatory Commission (FERC).

Perhaps most significantly, you repealed the Public Utility Holding Company Act of 1935 (PUHCA) which has led to a flood of new capital looking at transmission investment. Taking advantage of these new opportunities, MidAmerican has joined American Electric Power (AEP) in a partnership to invest over $1 billion in Texas in the next several years, primarily to connect West Texas' vast wind potential to the population centers in the central and eastern parts of the state.

Don't turn back the clock on any of these changes. We have noted with concern that one Senate bill (S. 341) proposes to repeal the shorter depreciation schedule provisions of EPAct 2005. I'm not sure what public purpose that would serve, and I hope you will carefully scrutinize this and other proposals that would make it harder to build new transmission.

Adopt Targeted Measures to Promote Transmission of Renewables

One of the key reasons that MidAmerican and AEP chose Texas for our transmission partnership is that Texas law promotes infrastructure investments to serve renewables through CREZ's or Competitive Renewable Energy Zones. State law provides for favorable regulatory treatment and siting processes for investments in these zones.

We have seen a number of proposals circulating in Congress to replicate these zones on a national level. The best ideas we have seen would:

1) Require FERC to ensure that utilities that build transmission to serve renewable generation recover their costs plus a reasonable return on equity;
2) Automatically designate national renewable energy zones as national interest electric transmission corridors;
3) Make these transmission investments eligible for incentive-based rate treatment pursuant to Section 219 of the Federal Power Act; and
4) Establish that transmission built in a national renewable energy zone is eligible for rate treatment similar to the California ISO's trunkline proposal currently before FERC.

I recognize that these provisions lie largely outside the jurisdiction of the Finance Committee, but hope that as part of your broader efforts on energy and environmental policy you will work with the Energy and Natural Resources Committee to give these proposals due consideration.

Summary

Renewable energy can play a vital role in allowing the United States to meet its twin challenges of enhancing energy security while promoting a cleaner environment. These technologies face challenges in the marketplace that require Congress to take an active role in eliminating both economic and technical barriers to their deployment. Most critically, you must provide long-term certainty for the financial incentives that help

reduce the impact of the high up-front development costs of renewables and promote tax and regulatory policies that support investment in electric transmission.

Thank you for providing me the opportunity to speak to you today, and I'll be pleased to answer any questions you may have.