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IREA Watts & Volts

COMANCHE 3 INVESTMENT TO SAVE IREA CONSUMERS $950,000,000

The $950 million of savings will result from a significant shifting of high cost gas generation to coal-fired generation. The savings will be passed on to IREA consumers through a rate decrease, an increase in capital credit refunds, and the absorption of normal inflationary increases through a total rate freeze. Proposed legislation threatens those savings, but we intend to protect our consumers' interests.

It has always been the objective of the Association to provide the best possible electric service at the lowest possible cost, with the added caveat of minimally impacting the environment. For a 22-year period, from 1982 until 2004, electric rates were kept at or below the 1982 level. Our rates have always been in the lowest one-third of the rates charged by Colorado's 26 cooperative and investor-owned utilities. Because most power plants built during the last 20 years burn natural gas, electric rates skyrocketed when gas prices increased dramatically. IREA consumers experienced these increases through fuel cost adjustments and a general rate increase of 7.9% in 2005. At this time, the fixed portion of our rates has been frozen, but the wholesale power portion fluctuates monthly. The power cost portion has stabilized recently and, over the last five months, has decreased slightly. We anticipate that this trend will continue until Comanche 3 comes online in 2009. At that time, we expect to reduce all rates by 7.9% (rolling back the increase of 2005) and freeze the entire rate structure. We hope to be able to maintain that freeze for a 10 to 15 year period. During the rate freeze period, capital credit refunds to consumers should increase to at least double the normal amount being disbursed prior to the plant coming online.

As we were struggling with the

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drastic increases in 2004 and 2005, we examined all options in an attempt to moderate rates. Our power supply contract with Public Service Company of Colorado (now called Xcel Energy) allowed us to own a portion of a power plant to be built by Xcel that would provide 30% of our load when the plant came online. The Comanche 3 plant will use supercritical pulverized coal technology that reduces emissions and improves efficiency relative to older coal plants. We immediately retained a consultant at a cost of approximately $130,000 to evaluate the opportunity. His evaluation concluded that our participation would result in significant savings to our consumers. We will own 25% of the plant (190 MW) at a cost of $366,000,000.

The energy situation in the United States is more challenging than it has ever been in the history of the nation. There are no simple solutions for complex problems. Although there are individuals who oppose pulverized coal power plants, in our opinion, it is the best alternative considering all factors at the present time. When we evaluated Comanche 3, we also looked beyond the economic advantages. It was important to us that the plant use the most up-to-date technology to reduce emissions as much as practicable. We did not hesitate to agree that not only should we use state-of-the-art pollution control equipment in the new unit, but that we should also help pay to install new, more effective pollution control equipment in the existing two units. We agreed to this expenditure even though we would not be receiving any extra power from those two units. We also did not hesitate to agree to spend $40 million for state-of-the-art mercury removal equipment. When the Comanche 3 project is complete, the three Comanche units will produce more than twice as much power as the two existing units, but with fewer regulated emissions than those from the two existing units.

There are basically three types of power generation now generally available. These are gas-fired, renewables, and pulverized coal units. Fuel prices currently are the main problem with gas-fired units. Renewables include hydro, solar, wind and biomass, with the most emphasis on wind power. IREA continues to use as much hydro as is available. The biggest drawback with wind power is that it is intermittent and must be backed up by conventional generation. The cost of wind turbines also is increasing steadily, and more and more citizens object to their unsightliness, noise, and danger to birds. Unfortunately, wind resources typically are not near load centers, so they also require expensive additional transmission facilities. Pulverized coal plants are the other option.

In the future, Integrated Gasification Combined Cycle (IGCC) plants, which convert coal to gas, will be developed. Nuclear will no doubt be revived and investments will be made in trying to develop a hydrogen economy. The problem is that these technologies are not feasible at present and will not come online for many years. In the meantime, reliable, low-cost power is available from coal found in the west-

ern United States. We have approximately a 250 year supply of coal. It makes sense that we should utilize that resource until a better solution is found.

One of the main concerns with coal and gas-fired generation is CO_2 emissions. Although some individuals would like to declare the discussion closed, the magnitude and importance of future climate change is a vigorously debated subject. A big issue is the effort to control CO_2. While there has been a slight (0.4°C) warming of surface temperatures in the last several decades, a similar warming took place in the early 20th century simply because the sun became hotter. However, observed warming does not portend some future disaster. In fact, combining the observed warming with the projections of computer climate models for the future yields a very modest change for the foreseeable future, rather than the disasters one reads about in the newspapers. It's important to put current climate changes in a larger perspective. The earth's surface temperature was probably warmer in medieval times, and certainly warmer for several thousand years after the end of the ice age some 10,000 years ago. Further, it was clearly warmer for 95% of the last 100 million years, and concentrations of atmospheric carbon dioxide were, at times, over twenty times greater than they were at the start of the industrial revolution. Many scientists who have taken a dispassionate look at climate change believe that it will be difficult for humans to even double the concentration of this gas. Yet, when the concentrations were so high, the earth was a greener planet with substantially more living species than today. Many proposals are circulating regarding global warming that would have no measurable effect on the temperature, even though the cost would be considerable. For example, if, as has been proposed, a tax on carbon emissions were to be imposed, Comanche 3 would still be needed and would be operated as planned, but the energy it produces would be much more expensive. At this time, there is no practical way to generate large amounts of reliable power without CO_2 emissions, but it is easy to impose a tax, take the money, and declare global warming solved. We must have a voice in identifying the scope of global warming and the appropriate solution.

This is not the first time that we have been challenged at IREA. Thirty years ago the issue was electromagnetic fields (EMF); fifteen years ago it was deregulation and diversification. The deregulation and diversification issue was almost as important as the CO_2 issue. We were told that if the electric utility industry deregulated, there would be more owners of generation, intense competition between utilities, and falling prices. We were also told that since deregulation was inevitable, we should diversify because we would lose 40% of our customers to competition. We rejected both conclusions and took an unpopular stance. In states that deregulated, rates increased dramatically. California and Montana were two states where consumers were impacted the most, not only by higher costs, but by reduced reliability as well.

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The northeastern states that deregulated are now facing rate increases of 70 - 80%. Hundreds of millions of dollars were lost by utilities that unwisely tried to diversify. We didn't lose a cent. Over several years, IREA spent hundreds of thousands of dollars to defeat legislative deregulation attempts. We used our own lobbyist, supported federal and state lobbying groups, and participated in and contributed to federal and state coalitions. The benefits to our consumers and our state have been overwhelming.

IREA serves over 133,000 consumers. We are the 12th largest in terms of consumers of the almost 900 cooperatives in the United States, and the second largest electric utility in Colorado. Our annual budget is now running between $300 and $400 million dollars. Within the next few years, we will have a total plant of about $1 billion dollars, and we will be the first or second largest cooperative in terms of plant investment. We have a lot to protect. We are members of the National Rural Electric Cooperative Association (NRECA) and the Colorado Rural Electric Association (CREA), which are national and state trade associations that will represent our view as legislation is considered nationally and in Colorado. Because of our size and the impact of all forms of legislation, we employ a registered lobbyist on our behalf. Those activities cost about $300,000 annually. We also devote many hours of staff time on major issues and are spending $100,000 for scientific data, analyses, and perspective on global warming issues.

There are numerous scientists and climatologists arguing that the amount of warming caused by human activity is and will be modest. Among these are Dr. Richard Lindzen, the Alfred P. Sloan Professor of Atmospheric Science at MIT, who in a June 20 Wall Street Journal article stated that, "determining how much of the increase is due to man's contribution and how much is due to natural variability is unknown." This uncertainty was also presented in a report by both the United Nations' Intergovernmental Panel on Climate Change as well as the U.S. National Academy of Sciences, which concluded, "The changes observed over the last several decades are likely mostly due to human activities, but we cannot rule out that some significant part of these changes is also a reflection of natural variability."

As an example, a blockbuster paper is about to appear in the scientific literature. Remember all those stories about how the deep ocean—not just the surface—is warming, and how this is "proof" that the computer model projections for the future are true? In the next month, *Geophysical Research Letters* will publish a paper showing that the deep-ocean warming suddenly reversed itself, late in 2002, and that there has been a considerable net cooling since then—of the entire top 2,500 feet of the ocean, averaged over the planet. Twenty percent of the total oceanic warming that has accrued since 1955 has just disappeared! There is simply no global warming model that predicts this type of behavior. Why? Perhaps because the com-

puter models assume much more carbon dioxide is going into the atmosphere than is actually being emitted, which makes them forecast too much warming. Because the real changes in carbon dioxide are lower. Respected scientists can and do disagree about matters as complicated as global warming. NRECA, which represents almost 900 distribution cooperatives serving over 30 million citizens, states in its climate policy that, "Despite years of intensive scientific study addressing climate change issues, sharp differences remain among credible scientific experts concerning the magnitude and timing of human-induced climate change potential." We believe that there should be an open discussion of this important issue.

Leaving aside for a moment the issue of how much of global warming is due to man-made contributions, we must consider the effectiveness of attempting to reduce warming, and at what financial cost.

We believe American citizens will not be willing to pay several hundred dollars monthly, from now until 2050 or even 2100, if the result would only be minor temperature reductions. A 0.07°C reduction by 2050 was predicted by Boulder scientists in response to the Kyoto Protocol, and has never been seriously challenged. Economist Bjorn Lamborg, author of *"The Skeptical Environmentalist"* concluded that "implementing Kyoto will cost $150 billion to $300 billion globally every year, merely to postpone the temperature rise by six years from 2100 to 2106. It's a very expensive way to achieve very little!!" The International Council for Capital Formation in Brussels (ICCF) concluded that Kyoto-like proposals by Sen. John McCain, R-AZ, to "cap and trade" U.S. greenhouse-gas emissions would reduce our gross domestic product by 1.9 percentage points by 2020 and cost 1.3 million jobs, and the average household would be $2,300 poorer each year as a result of higher energy prices and lower productivity.

This is, in all likelihood, a dramatic underestimation of the cost of Kyoto or its imitators. Economists had predicted that a gasoline price of about $1.75 per gallon would reduce usage consistent with Kyoto, which would require a 25% reduction in fossil fuel combustion from current levels. In fact, last year's higher prices were associated with a small increase (0.1%) in carbon dioxide emissions. So how expensive must gasoline become for consumption to drop by 25%?

So far, we are not presented with reasonable alternatives for addressing the issue. We are faced with enormous cost with very little gain.

Recently, U.S. Senator Jeffords and eight of his colleagues introduced a bill that would reduce carbon emissions to 80% of the 1990 level by the year 2050. This is 13 times more stringent than the Kyoto Protocol. It is difficult to picture the financial cost and lifestyle changes required for such a proposal. Now we are told that former President Bill Clinton on August 1st unveiled a plan to reduce global warming by slashing "about 80% of our greenhouse gases over the next 10

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years." These proposals are very much at odds with U.S. Department of Energy projections that our energy demands will INCREASE 45 percent by 2030. It is difficult to imagine the devastating impact that such a draconian measure would have on our economy, or what life would be like if we were forced to reduce by 80% all energy consuming activities such as air conditioning, lighting, washing and drying clothes, and driving. Virtually all modern homes, buildings and industries depend upon a reliable, reasonably-priced energy supply. It is necessary to have scientists testify to the minor impacts on global temperature and the extraordinary costs to our consumers and our economy that would result from such proposals.

We will be faced with many federal and state legislative proposals. In Colorado, we have been informed that a "Colorado Climate Project" has been organized. It has stated that, "the mission of the Colorado Climate Project is to reduce Colorado's contribution to and vulnerability to climate change by developing and getting implemented a Colorado Climate Agenda of actions to reduce emissions of global warming pollutants in Colorado, and to prepare the state to deal with the climate changes that may still occur. Those recommendations will be presented in 2007 to Colorado's next Governor, the Colorado General Assembly, local governments, water providers, and the private sector." The project has already concluded that CO2 must be reduced and labels it as a pollutant. Analysis of the project's recommendations will be crucial.

Because of the tremendous potential impact of various possible proposals, IREA will be significantly involved. We will be active with our national and state trade associations in lobbying the issue. We will participate in state and federal coalitions. Our total involvement will equal or exceed our deregulation activities. However, we have $950 million of savings at stake.

We are constantly aware of our overriding objective of providing the best possible service at the lowest possible cost. We will make those financial commitments necessary to achieve our objectives. We will keep you informed on our activities through our *"Watts & Volts."*

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