

Two Degree Scenario Analysis

WHEREAS:

In November 2016 the Paris Agreement entered into force and its goal of keeping global temperature rise well below 2 degrees Celsius began to shape national policy decisions. To meet this goal the International Energy Agency estimates that the global average carbon intensity of electricity production will need to drop by 90 percent. The U.S. Environmental Protection Agency's Clean Power Plan is a first step in limiting climate change from the power sector; however, additional emissions reductions will be required for the U.S. to meet its obligations under the Paris Agreement.

The International Energy Agency and the International Council on Clean Transportation forecast that electrification of transport will play a critical role in achieving the necessary greenhouse gas reductions by 2050.

In June 2016, the credit rating agency Moody's indicated that they would begin to analyze carbon transition risk based on scenarios consistent with the Paris Agreement, and noted the high carbon risk exposure of the power sector.

Rapid expansion of low carbon technologies including distributed solar, battery storage, grid modernization, energy efficiency and electric vehicles provide not only challenges for utility business models but also opportunities for growth. Many large corporations are actively seeking to increase their use of renewable energy, providing a significant market opportunity for forward-thinking utilities.

Coal continued to account for 76 percent of Ameren's total generation in 2014. Ameren's 2016 Integrated Resource Plan update outlines plans to add small amounts of renewable generation, continue nuclear generation and convert some coal plants to natural gas; although these plans aim to achieve a 30% reduction in carbon dioxide emissions by 2035, based on 2005 levels, to meet the requirements of the Clean Power Plan, much more stringent emissions reductions will be needed to keep temperatures well below 2 degrees.

Ameren has not provided details regarding how the 2 degree challenge is being accounted for in capital investment decisions, predictions of future demand, plans to provide affordable and reliable energy for ratepayers, particularly low income customers, or plans to manage climate change regulatory risk or market changes due to

low carbon technologies. Such information would allow investors to better assess the risks that climate change regulations may pose to the company and shareholder value.

RESOLVED: Shareholders request that Ameren, with board oversight, publish an assessment (at reasonable cost and omitting proprietary information) of the long term impacts on the company's portfolio of public policies and technological advances that are consistent with limiting global warming to no more than two degrees Celsius over pre-industrial levels.

Supporting Statement: This report could include:

- How Ameren could adjust its capital expenditure plans to align with a two degree scenario; and
- Plans to integrate technological, regulatory and business model innovations such as electric vehicle infrastructure, distributed energy sources (storage and generation), demand response, smart grid technologies, and customer energy efficiency as well as corresponding revenue models and rate designs.