Risk Management Report
January 23, 2018
The meeting began at noon and adjourned at 3:45.

Renewable Energy -- Henry Dykema, Sundance Solar Systems NABCEP (North American Board of Certified Energy Practioners) Certified, PV (photovoltaic) Professional presented an overview of renewable energy installations in Montana. He provided a comprehensive review of how solar systems work and what they cost customers. He described in detail three levels of solar installations: off-grid, grid-tied and grid-tied with batteries. Grid-tied systems with batteries are and the most expensive solution with the most reliability and flexibility. They keep the power on when the grid goes down.

Supporting clean power and wishing to have an independent energy source are the most common motivations for installing renewable systems Dykema reported. He asked the board to examine the potential impact of net-metered systems on co-op revenue realistically – the impact of current systems and likely additional installations over the foreseeable future is small.

Action: Dykema will be available to respond to BEC questions about solar technology, net metering issues, renewable systems and technical requirements for supporting installations in our area.

The Public Utility Regulatory Policies Act (PURPA), enacted November 9, 1978, is part of the National Energy Act. Its goal is to promote energy conservation and encourage greater use of domestic energy and renewable energy. Manager Kevin Owens highlighted a report from NRECA on its application to electric cooperatives. The question raised for BEC is how federal PURPA requirements to accommodate producers of renewable energy that qualify to sell power to a given utility relate to our policies for net metering and distributed generation. BEC counsel previously reviewed the document and reported that individual provisions in the law apply differently to co-ops in different states. Counsel advised that BEC would need to confirm an initial expectation that the co-op’s policies (particularly POLICY 418) are not affected by PURPA. Kevin noted that PURPA is being reviewed and changes are likely. He intends to examine the NRECA report further and provide a detailed report to the committee and board.

Action: Before the February 15 risk management meeting Kevin will consult with Counsel Larry Martin to prepare an outline/explanation of PURPA requirements that may apply to BEC policies related to renewable energy and net metering.
**Power issues** -- Bill Pasco reviewed a widely used tool for looking at the impact of renewable energy on commercial scale power supply in California. The “Duck Curve” profile is named for the shape of the graph of that shows a daily dramatic decrease in conventional power dispatches (the duck belly) as the availability of renewables (mostly solar power representing the back of the duck) increases with sunlight. A dramatic increase in conventional power use creates a neck curve rise and head peak as the sun sets and solar power decreases. The curve shows production over the course of a day with a timing imbalance between peak demand (following end of work day) and renewable energy production when solar power is not being generated. Bill reviewed a second chart showing dramatic over production of power in California as the addition of renewable power increases and utilities use the lowest cost available resources. Using the excess power in the future is a challenge with possible exports increasing to Washington and Oregon that have less sun but aggressive mandates to increase the percentage of renewable energy use.

**2018-2019 risk management evaluations** – Arleen distributed a preliminary list for discussion of BEC issues and activities that will require evaluation and analysis in 2018 and into 2019. Many issues relate to a potential rate design evaluation that will use data from new meters that will begin to be installed in the second half of 2028. Renewable energy strategy and a possible community solar project will require both member input and analysis of projected financial impacts.

**Action:** The committee asked Bill Pascoe and Arleen to prepare an initial draft of an evaluations schedule for 2018 for discussion at the next meeting.

**Forecast Update** – Frank Willett reported that Kim Mikkelson is available to update the 7-year forecast in early February of later in March. The list of needed data for the update will be available by January 30. If there are changes following final audit can be entered as a simple update.

**The committee recommends** getting necessary material to Kim for update of model for review at the February 15 risk management meeting and recommends a presentation by Kim of the plan and review for board and staff of the important financial components of a solid co-op financial framework and how BEC achieves that. Arleen will confirm availability with Kim and present a proposal with Kevin at the January 30 board meeting.

**Cyber Security** -- Walter Clapp asked the status of the evaluation of cyber security issues raised at the January meeting. He noted the importance of the issue and the committee agreed that it is critical. Kevin will update the committee at the next meeting on results of the outside evaluation of the co-op’s security needs and planned activity to address them.

**Committee name** -- Board member Dan Dutton asked about the risk management committee name and whether it has a negative connotation that might alarm
members. The committee will discuss the issue and potential alternatives at the February 15 risk management meeting and report to the board.

Arleen Boyd, Risk Management Chair