THE SPOKES SPEAK - GEARED TO SERVICE

Rotary Club of the North Fork Valley

POB 1543, Paonia, CO 81428

WEB SITES: rotary.org rotary5470.org northforkrotary.org

Meeting Thursdays at Noon in the Paonia Town Hall (Temporarily Suspended)

District 5470 **Club 1180 - Chartered 12/20/22**

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LAST MEETING: December 10, 2020 (via Zoom)
President Campbell presided.

Visiting Rotarians: Bob McHugh – Montrose Rotary
Other Guests: none
Key Guest: No key guest
(Annette now has the key).

ANNOUNCEMENTS:

- We had a 57% turnout for the Zoom meeting today.
- The KPP dinner was successful. The dinner itself brought in $748.00. Additional donations brought the total to $3648.00 for the NFV Rotary Scholarship Program. Most of the donations came from non-Club members.
- The Club has provided a $50 donation to the Delta County Independent to provide newspapers to Paonia students. No newspapers were being provided to Paonia prior to Pam making the request that our donation be used for Paonia.
- While the Hotchkiss City Market now has an employee stationed at the door offering a mask to customers without one, patrons who refuse to wear one are not prevented from entering.
- Committee Chairmanship positions available for:
    - Public Relations Committee. Facebook familiarity (or willingness to learn) would be helpful.
    - Fundraising Committee. Ideas for non-contact fundraising needed. Contact Pam or Randy.
- Anyone wishing to take over as Newsletter Editor is welcome to do so. Contact a Board Member.

PROGRAM: Colorado Public Utilities Commission - John Gavan
Annette introduced John Gavan, who was appointed to the Public Utilities Commission in December of 2018 by Governor Hickenlooper and confirmed by the legislature the following month with a term extending to January of 2023. His home is in Paonia when not over in Denver. Prior to that he was on the board of the Delta Montrose Electric Association as well as Solar Energy International. He spent most of his career in I.T. after serving in the Navy. He also worked at MCI, was the head of I.T. at NASA headquarters and worked at the Delta County Libraries.

Mr. Gavan began by describing the role of the Public Utilities Commission (PUC). He explained that it is designed to regulate utilities to serve the public interest by ensuring safe, reliable and reasonably priced services that are made available to the public. The PUC consists of three Commissioners and about 85

staff members, consisting of mainly economists, engineers and lawyers. This dedicated staff has great depth of knowledge of all the issues the commission deals with.

The PUC has wide jurisdiction, covering energy and water, telecom (mostly 911 services), transportation network companies (such as Lyft and Uber, as well as taxis and limousines), gas pipeline safety and rail and transit safety. But 90% of the work that they do is really focused on the energy sector.

The state of Colorado has three different types of electric utilities: Investor-owned utilities, municipally owned utilities and two types of co-ops. There are generation and transmission co-ops, such as Tri-State, and distribution co-ops which buy power from Tri-State and provide it to individual households.

While a primary role of the PUC has been to regulate investor-owned utilities such as Xcel Energy, particularly in terms of the rates they are permitted to charge customers through lengthy hearings and testimony, a new focus has become the issue of climate change. The Colorado Legislature passed a sweeping bill in 2019 that established very aggressive greenhouse gas reduction targets for Colorado. Since energy generation is a prime contributor to greenhouse gas emissions, roughly equal to the emissions of the transportation sector, the legislation required an 80% reduction in emissions by the energy sector by 2030. This will require a huge reduction in the amount of fossil fuel generation, supplanted by massive buildout of solar and wind generation technology. At the same time, emissions from transportation are being addressed with a target of putting 940,000 electric vehicles on Colorado roads by 2030. The PUC is also requiring that electric utilities file transportation electrification plans with the Commission to allow the utilities to get into the electric vehicle charging business. The charging of electric vehicles could take an additional 35% more power generation capacity.

To meet these requirements, major solar and wind generation projects are being developed, both on the eastern plains and on the western slope. These being intermittent sources, a wide range of energy storage technologies are being explored aggressively as well. Another area of focus is in the transmission of power from distant and dispersed sources to the large urban load centers. A lot of work is also going into converting as much energy use as possible into electrical applications that can take advantage of the renewable generation technologies being developed.

The grid of the future will be very different than what we have today. The large central power station will be replaced by distributed power generation, such as residential rooftop solar. Individuals will become active participants in the energy market, selling power to the utilities as well as consuming it. With households having batteries charged by their solar arrays, a "virtual power plant" can be created to provide power when needed via the "smart grid". And as electric vehicles become more common, their batteries can contribute power to the grid when needed as well. Since the smart grid depends on high-speed internet, our area will be well positioned to take advantage of these.

Q and A:

Q: Is there any pressure on the PUC to investigate nuclear power as an energy source?
A: Everything is on the table. There are some very interesting developments in the area of small, modular reactor technology. These are both much safer and much less expensive than large centralized reactor facilities. The PUC is watching this technology closely.

Q: What about hydrogen for power generation?
A: This is an interesting area because excess solar and wind power can be used to produce hydrogen. This in turn can be used as a supplemental fuel source for power generation at times when insufficient renewable power is being generated. Many obstacles remain in order to make this economically viable, but it is an active area of research. This technology could be 20 years out or more.

Q: Who is responsible for monitoring greenhouse emissions from agriculture?
A: The Air Quality Control Commission (AQCC) is working on rule making, which will define various responsibilities. All of this is new, so there is not really a baseline to measure the emission profiles of various businesses against. Developing these baselines is critical.

Q: Where do we stand on conservation?
A: A segment of the utility business called Demand Side Management (DSM) consists of initiatives like rebate programs for energy efficient appliances. High performance building codes are also being discussed. New construction is the easiest place to implement energy efficiency. Technologies to manage and reduce peak load on electrical utilities can also be very valuable and a lot of work is being done in this area.

Q: You give a very heartening and exciting talk. Can you envision where we will be in the next century?
A: The coming democratization of energy portends a future that is very bright. The big investor-owned utilities are dinosaurs in this new model. Like the telecom revolution created entirely new ecosystems of products and services, the same is likely to take place in the power sector. It will be a whole new world and electric rates will fall through the floor in the next 50 years.

Q: Will power attachments for vehicle charging be standardized?
A: Yes, that problem has already been solved. There are currently two charging standards: Tesla and everyone else. Charging stations being built now will support any car. Xcel will be installing DC fast charging stations all across their service area, as will private companies like ChargePoint and EZGo. In addition, battery technology is improving by 15-20% a year.

Q: How can individuals get in touch with the PUC to get additional questions answered?
A: Tony Steva published an article about 3 weeks ago that may answer many questions. Copies will be sent to all Rotary members shortly. Mr. Steva would be happy to answer additional questions. Mr. Gavin said he would also be happy to answer questions.

UPCOMING MEETING PROGRAMS:

Date	Speaker	Program	Member
12/17/20			John Coombe
12/24/20		Christmas Eve - no meeting	
12/31/20		New Years Eve - no meeting	
1/7/21			Susie Coombe
1/14/21			Glenn Dahlgren
1/21/21			Marsha Grant

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