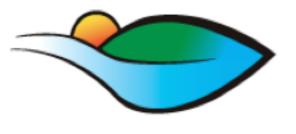
Briefing for Candidates for the Pedernales Electric Cooperative Board of Directors

Hosted by Friends of PEC, Public Citizen, Clean Water Action and SEED Coalition April 29, 2015

Cooperative Principles and Governance

Karen Hadden

PEC Member and Director, SEED Coalition



Sustainable Energy and Economic Development

SEED COALITION

- Work for clean energy, clean air and water, and protection of health throughout the state of Texas
- Provide educational outreach and advocacy on these issues
- Work with local communities and coops
- Hosted an Energy Innovation conference in Tyler, TX in 2013, which included PEC Board member Patrick Cox as a speaker

Cooperative Principles at PEC

Cooperatives serve their member-owners

- Pedernales Electric Cooperative has served its members since 1938.
- Members are owners of the utility and have a say in its decisions and its future.
- Allows democratic decision-making that benefits the community.

Past Corruption at PEC

- PEC board became corrupt
 - Money was mismanaged
 - Board member salaries, benefits were inflated and inappropriate reimbursements were made
 - Members didn't receive dividends
 - Board meetings were closed to the public
- PEC board was self-perpetuating

Reforming PEC

- PEC members organized in 2007 to regain control of the coop
 - Members brought a lawsuit against the coop
 - □ Members spoke out at 2007 annual meeting
 - Some PEC board members eventually resigned and others didn't seek re-election

Reforming PEC

- PEC bylaws were improved
 - 2008: Bylaw changes allowed reform candidates to be elected
 - 2010: Member Bill of Rights was Added to the Articles of Incorporation, establishing voting and election safeguards, and setting open meetings and open records policies that can only be removed without a 2/3 member vote
 - 2012: Directors' Code of Conduct was passed
- Transparency, fiscal responsibility, and member communications improved
- Energy planning improved. Renewable energy and energy efficiency goals were passed and programs established

Affordable Energy

Tom "Smitty" Smith

PEC Member and Director, Public Citizen's Texas Office



- Consumer advocacy organization
- Work to ensure that products, including electricity, are safe during their production, use and disposal.
- Advocate for a rapid transition away from fossil fuels in favor of energy efficiency, demand response and renewable energy to protect human health and the environment, and minimize consumer costs.
- Advocated for democratic control of electric cooperative in 9 states

Clean Energy is Affordable Energy

- Reducing energy use through energy efficiency upgrades benefits all co-op members, as it is cheaper than purchasing energy.
- Texas has more wind and solar energy potential than any other state and leads the nation in wind development.
- Energy from large-scale wind and solar farms is cost competitive in the ERCOT market.
 - Many utilities, including LCRA have added wind to their energy portfolios to keep costs down.
 - Utilities, including CPS, Austin Energy, LCRA, and Georgetown are now adding solar energy to provide affordable peak power.
 - First Solar's Barilla solar farm in west Texas is operating as a merchant power provider without a power purchase contract.



New Generation/DSM Technology Costs

Combined Cycle Natural Gas: \$69.99/MWh

West Texas Solar PV >50 MW: \$52.26/MWh

West Texas Wind: \$36.75/MWh

South Texas Wind: \$44.00/MWh

Reducing Rates

- PEC board reduced rates 3 times since November 2014, saving the average member \$15/month
- PEC rates are near the state average
- This has all occurred while being the fastest growing coop in the nation

Embracing Affordable Clean Energy

Existing PEC goals

- □ 30% of its energy supply renewable energy by 2020
- Reduction of annual electric demand growth by 20 percent, using energy efficiency and demand management programs
- PEC board recently passed a resolution to increase investment in renewable energy
 - Large-scale solar through LCRA
 - Local community and commercial solar at strategic locations
 - Low-cost loans through on-bill financing for member-owned solar or other renewable energy installations at their homes and businesses

Energy-Water Nexus

David Foster

Director, Clean Water Action's Texas Office



- National non-profit active since 1972; in Texas since 1988
- 35,000 in Texas, with some 7,000 in PEC service area 35,000 in Texas, with some 7,000 in PEC service area
- Work to protect water resources for now and the future
- Professional field and phone canvass teams
- Candidate questionnaire and possible endorsement

We all Live Downstream

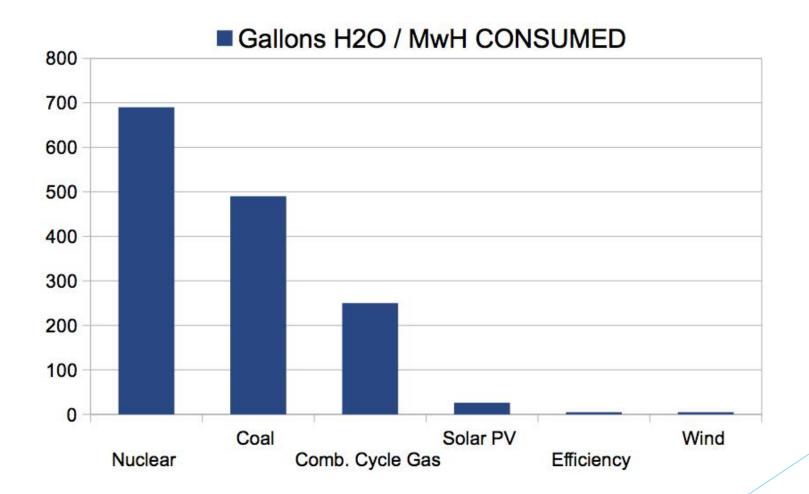
Water Quality Impacts of Energy Production

- Coal-fired power plants the #1 polluter on water in the US fly ash ponds & sludge from scrubbers (EPA)
- Texas is #1 in the nation in mercury pollution from coal plants
- Fayette coal pond has leached 6 toxic heavy metals into groundwater above state and federal standards
- Fracking: one million+ gallons of heavily polluted wastewater is produced per well

Water Quantity Impacts of Energy Production

- 85% of US power plants heat water to create steam for turbines
- They cannot function without massive amounts of reliable water
- LCRA estimate: 20% of all water withdrawn from CO River downstream of Austin is for power plants.
- 2% of this water is lost to evaporation (consumed)
- Fracking: 2-9 million gallons of fresh water used per well

Water Consumption Varies Substantially by Energy Source



Water-Energy Nexus and PEC

- Average household use of 1275 kWh = 427 gals of water / month!
- Energy purchased from LCRA in 2014 = 1 billion gallons!
- Programs to reduce energy use also save water
 - Time-of-day rates to move energy consumption to off-peak hours, when more wind energy is available
 - Encouraged distributed (rooftop) and community solar
 - Contracts for wind and solar

Energy Efficiency and Renewable Energy are Water Conservation Strategies



- Austin Energy's efficiency programs by 2008 saved 800 MW of peak energy demand AND saved at least 370 million gallons of water per year
- 2009 projection from AE:
 - 2020 Plan (35% renewables) would lower water consumption per kWh by 21%.
 - □ Actual reduction to date: 38%
- Mayor Dale Ross: "Our move to renewable power is a significant reduction in our total water use in Georgetown,"

Energy Diversity

Richard Golladay

PEC Member and Board Member, Friends of PEC

Friends of PEC

Friends of PEC is comprised of members of the Pedernales Electric Cooperative

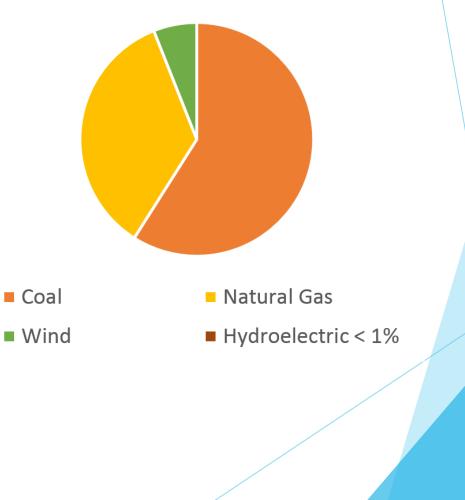
Priorities

- Maintaining low costs and quality service
- Establishing a diverse energy supply that includes renewable energy
- Conservation of energy and water
- Leadership and governance that assures the autonomy of democratic member control
- Visit <u>www.PECfriends.org</u> for more information.

Energy Diversity

- Environmental regulations on coal generators and the economic competitiveness of natural gas will cause the transition from coal to natural gas.
- Water availability restricts hydroelectric power.
- Adding wind and solar energy to the co-op's portfolio expands energy diversity and will make PEC more resilient





Benefits of Renewable Energy

- Central Texas drought and changing weather patterns put stress on water resources
 - Lakes Buchanan and Travis cannot sustain the evaporative loss due to the Rankin cycle at LCRA's fossil plant reservoirs
 - LCRA's newest \$500 million Ferguson gas plant could become a stranded asset because Lake LBJ is vulnerable to drought (fed by Llano River and Lake Buchanan)
- Large-scale wind and solar are successful energy sources that use no water, and are be less likely to become stranded assets
- Wind and solar have already reached price parity with natural gas

Customer Choice

Tom "Smitty" Smith

PEC Member and Director, Public Citizen's Texas Office

Member Control Leads to Better Service and Lower Rates

- An electric utility that is controlled by its customers must be responsive to their needs and preferences.
 - In the last couple of years, PEC has been particularly active in soliciting member feedback via surveys and member forums.
 - Members are able to vote for directors who share their policy priorities for the co-op.
- PEC has been responsive to member concerns
 - Went through an audit
 - Reduced rates 3 times
 - Reduced staff and reduced down time

Deregulation Not the Path to Lower Bills

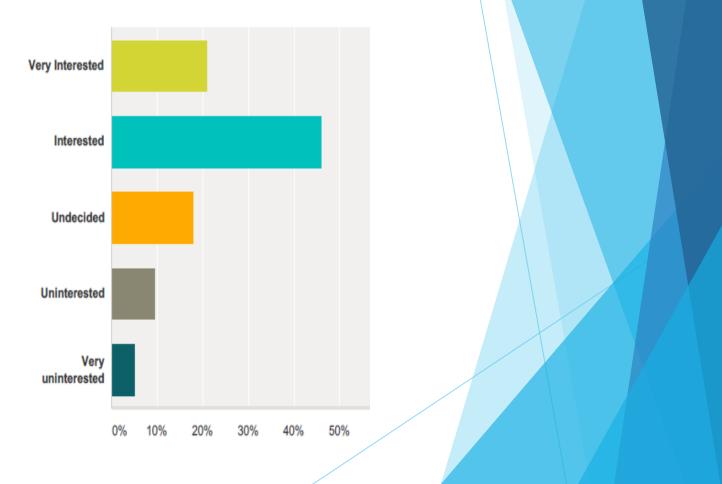
- In 60% of the state you can "shop for power"
- Electric utilities divided into 3 parts: generators, retailers, and transmission companies
 - Each company must earn a profit on each kWh sold
 - Each company maximize profits for its shareholders, whereas coops maximize benefits to members and return annual dividends
- Retail electric providers (REPs) in the competitive market use sales tactics to get customers, but don't look out for their long-term interests
 - Some customers in the deregulated market actively shop, and some get good deals, but they are typically of limited duration and have lots of hidden fees
 - Many customers stay with one company and generally pay more
 - Customers in rural areas pay more

PEC is Offering Customer Choice

- Over 7,000 PEC customers completed a member preference survey (bit.ly/PEC15survey)
- PEC developing programs that provide options to provide members more control over energy use and production
 - Several energy efficiency programs offer members choices of how to reduce their energy use
 - Solar on-bill financing and community solar programs will offer members expanded access to generate their own electricity or buy into a co-op-owned solar facility
- PEC is considering new rate plan options
 - Time-of-use rates that reflect different prices paid by the co-op for peak and off-peak energy in the summer and winter
 - Time-of-production rates to compensate solar owners

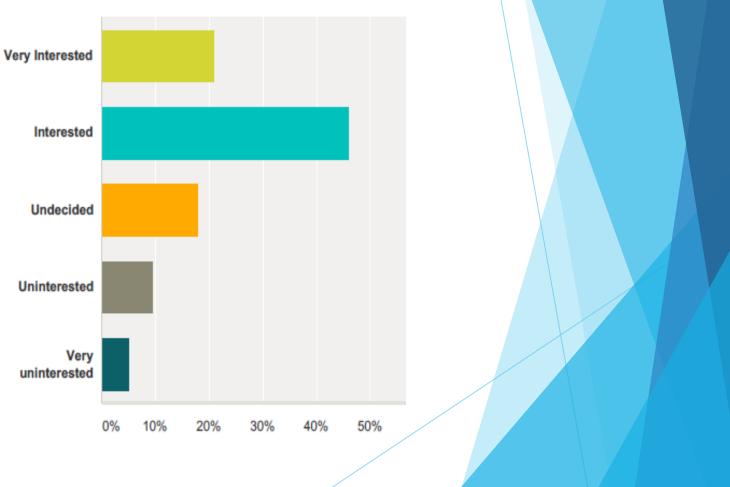
From the PEC Member Survey: Time-of Use Rates

- How interested would you be in participating in a timedifferentiated rate program that rewarded you for using energy during non-peak hours when the prices PEC pays its wholesale power producers are lower (e.g., 6 p.m. to 10 a.m. in the summer)?
- This type of rate would help you save on energy costs if you're able to adjust the times in which you use the most electricity, like doing laundry or running machinery.



From the PEC Member Survey: Inclining Block Rates

How interested would you be in a rate program that breaks your average bill into three rate blocks? The electric rate for the first block of energy is lower than you pay today. The electric rate for the second block is about the same as you pay today, and the electric rate for the final block is higher than you pay today. Members with lower than average use would see their bills go down, and members with higher than average use would see their bills go up. You could save money by conserving energy and keeping your electric use at modest levels.



From the PEC Member Survey: Renewable Energy and Solar

- > PEC has a responsibility to use renewable energy resources that benefit the environment
 - 71% strongly agree or agree
 - 12% strongly disagree or disagree
- PEC should provide members rebates for installing energy efficient-equipment
 - ▶ 82% strongly agree or agree
 - 9% strongly disagree or disagree
- PEC should provide members rebates for installing renewable generation like solar panels and wind turbines
 - 75% strongly agree or agree
 - 11% strongly disagree or disagree

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Summary

What PEC Has Done Well

- Regained control of the board and management
- Opened governance, webcast meetings
- Adopted bill of rights
- Audited, cut waste and perks
- Set goals
- Reduced rates 3 times
- Surveyed members

What's Next

- Buy next generation of resources
- Plan for drought
- Develop new rates
- Educate members on how to save energy/ money
- Develop new programs
- Develop new business model
- Plan for growth