

## Texas Electric Cooperative Concerns Regarding EPA's Inclusion of Texas in the CATR for Annual SO<sub>2</sub> & NO<sub>x</sub>

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- Texas Electric Cooperatives have a significant interest in the outcome of the CATR rulemaking. Cooperatives receive power from several coal-fired power plants in Texas, including the LCRA Fayette plant, the AEP Pirkey plant, and the San Miguel Electric Cooperative (SMEC) plant.
- A compelling example of the potential impact of CATR on Texas cooperatives is the potential impact to the output of the SMEC lignite fired electric generating facility, 100% of which is sold to its member cooperatives South Texas Electric Cooperative and Brazos Electric Cooperative and the wide network of distribution cooperatives they serve.
- Being not-for-profit, SMEC and other cooperatives will be forced to pass along to consumers all costs of meeting any new requirements that may result from the implementation of CATR, including the hundreds of millions of dollars it would take to retrofit or replace facilities. Specifically, SMEC has calculated the following economic consequences of being included in the CATR for annual SO<sub>2</sub> and NO<sub>x</sub>:
  - Costs associated with fuel switching:
    - To western (PRB) coal: \$87,400,000 for plant conversion + \$22,000,000 for mine closure (excludes rail spur upgrade)
    - Annual increased fuel cost of at least \$14,835,000 (assumes PRB coal prices do not spike)
    - Loss of 250 full time jobs in rural Atascosa County, Texas
    - Lost annual direct economic impact of \$51,218,936 (does not include lost capital expenditures)
  - In the event the existing plant is retired rather than repowered with PRB coal:
    - The outstanding debt and decommissioning cost to SMEC's members would be at least \$300,000,000.
    - Loss of 450 full time jobs in rural Atascosa County, Texas
    - Lost annual direct economic impact of \$101,122,711 (not including lost cap. expenditures)
  - Plus financial impact on member coops from scarcity pricing and natural gas price increases associated with capacity shortfall projected to be experienced.
- San Miguel is especially concerned with the CATR proposal given numerous errors it has discovered in Technical Support Document (TSD) included in the docket. Among other things, the TSD shows the San Miguel unit has an SCR although the unit does not have an SCR and there are no plans to install one. There are also a number of discrepancies between EPA projections and real world situation at the SMEC site, including the following:
  - Ozone Season Heat Input (EPA: 1,024,060 mmBtu) (Actual: 16,889,822 mmBtu)
  - Annual Heat Input (EPA: 10,240,600 mmBtu) (Actual: 32,449,214 mmBtu)
  - Ozone Season NO<sub>x</sub> (EPA: 845 tons) (Actual: 1,489 tons)
  - Annual NO<sub>x</sub> (EPA: 845 tons) (Actual: 3,008 tons)
  - Annual SO<sub>2</sub> (EPA: 770 tons) (Actual: 10,808 tons) Note: A reduction down to 770.4 tons would require a control device that constantly achieves reduction efficiencies of 99.5%, which is beyond the operational capabilities of a new scrubber at a new facility.

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- EPA proposed the Clean Air Transport Rule (CATR) on July 6, 2010. Under the proposal, Texas was required to make NO<sub>x</sub> reductions from May 1 - September 30 of every year, but no SO<sub>2</sub> reductions were required of Texas because EPA found no connection between Texas' SO<sub>2</sub> emissions and any down-wind noncompliance of NAAQS as a result of such emissions. This is in large part thanks to the proactive steps of Texas plants which has resulted in a 33% reduction of SO<sub>2</sub> emissions over the last 10 years.
  - Long after the close of the public comment period, EPA now plans to include Texas in the annual SO<sub>2</sub> and NO<sub>x</sub> programs when it finalizes the CATR later this month. Contrary to the letter and intent of the Federal Clean Air Act, EPA is taking an unprecedented approach of usurping the State Implementation Plan (SIP) process and issuing this rule as a direct Federal Implementation Plan (FIP) that mandates compliance by the end of this year.
  - The only way to meet emissions reductions by the January 2012 compliance date will be to shut down affected coal-fired units for most of year. The rule would ultimately require the permanent shutdown of numerous coal and lignite-fired power plants and likely multi-million dollar retrofits on plants that are able to continue to operate.
  - The resulting mine and power plant shutdowns will eliminate thousands of jobs and millions in state and local tax revenue and increase electricity prices, as well as strike a devastating blow to electric reliability in Texas (which is already in jeopardy as depicted in the attached figures).
  - The drastic and immediate reduction in the availability of large lignite power plants will lead to significant electricity price increases on the order of at least \$1 billion per year in Texas.
  - ERCOT currently predicts that 21,808 MW of additional capacity will have to be constructed by 2021 in order to meet demand under the most optimistic of their three retirement scenarios (without taking into consideration the impact of any new environmental regulations). If Texas were to maintain its current generation mix, we will need to build more than 14 coal plants + 66 natural gas plants + 2 nuclear plants + 3,200 wind mills. ERCOT projects this capacity shortage could more than double by 2031 (51,127-77,975 MW).
  - ERCOT also recently projected that this capacity shortage could dramatically worsen as a result of new federal environmental regulations. Not factoring in the current threat of Texas being included in the CATR for SO<sub>2</sub> and NO<sub>x</sub>, ERCOT already projected over 9,300 MW (8,100 MW of gas and 1,200 MW of coal) would retire rather than retrofit by 2016 due to technical feasibility and economic considerations.
  - If Texas were included in the CATR for annual SO<sub>2</sub> and NO<sub>x</sub>, this capacity shortage will dramatically accelerate given its significant impact on the 24,294 MWs of installed coal-fired power plant capacity. Based on realistic project development timelines, this shortfall would be insurmountable before an unprecedented electric reliability crisis was experienced in Texas.
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# ERCOT Capacity and Demand Projections – 2011



This ~58,000 + MW gap in 2031 is the energy equivalent of approximately:

-  44 nuclear powered units
-  96 coal-fueled units
-  431 gas-fired units
-  150,000 + wind turbines

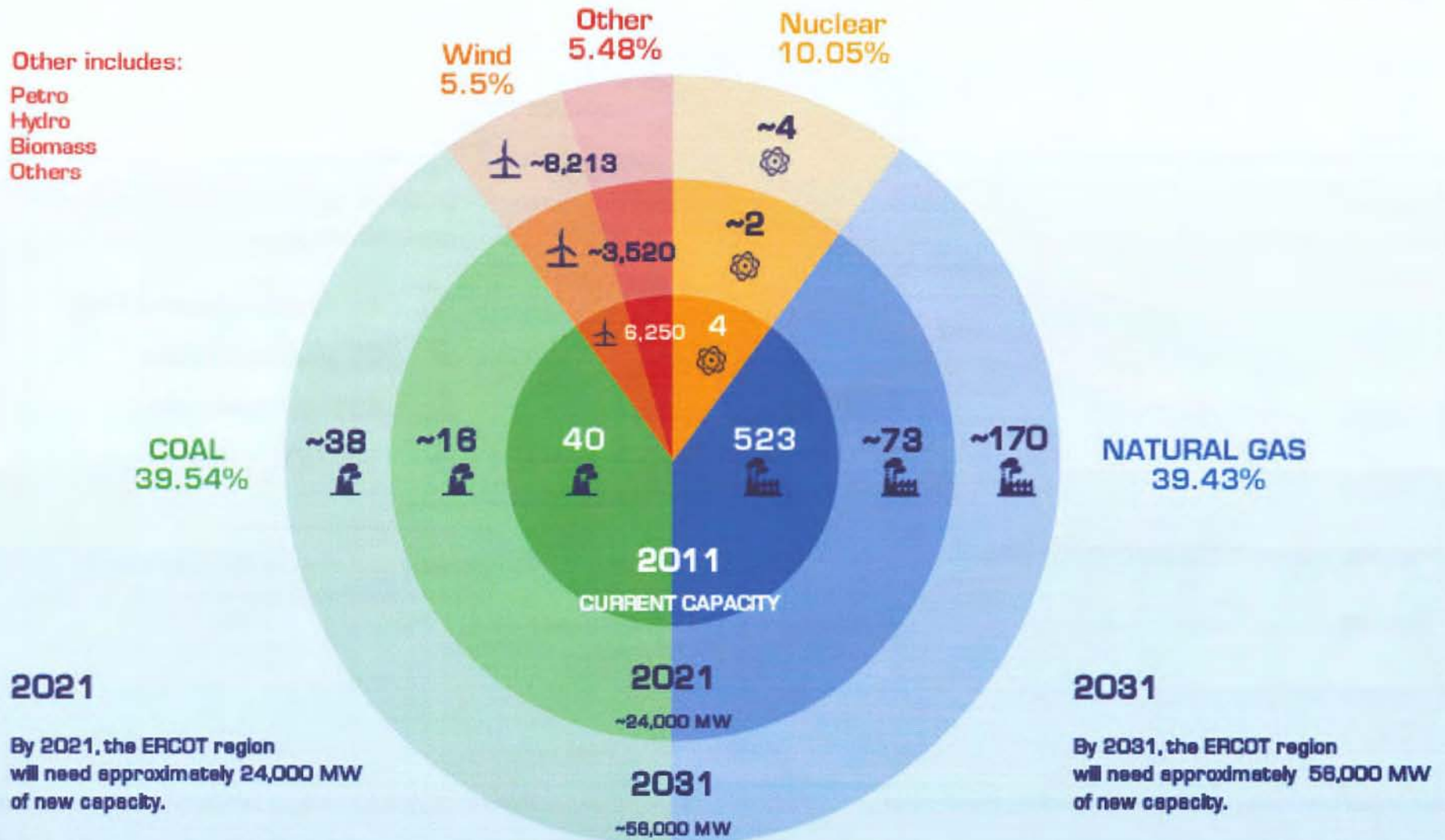
ENERGY GAP

Based on data from the U.S. Energy Information Administration, Facility Output Capacity, 2009

- Total Requirement MW
- Capacity - 50+ yr. units MW
- Peak Demand MW
- Capacity - 30+ yr. units MW

Based on ERCOT Report May, 2011 and 13.75% reserve margin

# Texas Capacity and Demand Projections – 2011, 2021 and 2031 New Generation Based on Percentage of Existing Capacity



Based on ERCOT Report on Capacity, Demand and Reserves in the ERCOT Region, May 2011 and average facility output according to U.S. Energy Information Administration, Facility Output Capacity, 2009 (Form EIA-860 Database).

Wind calculations are based on 2009 data, which demonstrate an average generating capacity of 1.5 MW per turbine and a 25% capacity factor.

Note, however, that ERCOT uses an 8.7% factor for wind generation nameplate capacity when calculating reserve margins.



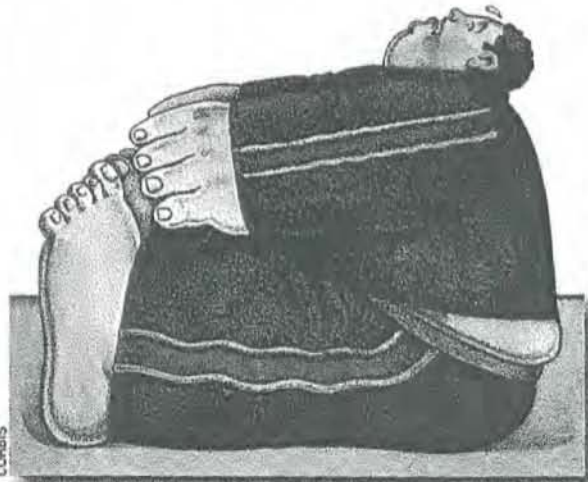
## WINNING BY LOSING

Overweight people compete each week on NBC's *The Biggest Loser* to see how many pounds they can shed. Now, members with large energy appetites at two Minnesota electric co-ops are competing to become "The Littlest User."

Three households consisting of "average" consumers and three owned by co-op employees, each served by Wright-Hen-

nepin Cooperative Electric Association in Rockford and Lake Region Electric Cooperative in Pelican Rapids, began vying April 1 to see who can save the most energy. The competition runs until July 31.

"The winner will be determined by comparing each participant's electricity use with the same four-month period last



Watt power meter to measure how much electricity appliances, computers, TVs, and cell-phone chargers use, as well as a thermal leak detector to deter-

mine a home's energy loss through structural components, such as windows. While a member might decide to caulk around windows, neither co-op will offer assistance. This contest, like losing weight, revolves around individual initiative and self-discipline.

"We're trying to build consumer awareness of energy savings," comments Tollerud. "Especially the little things, like caulking, that don't cost much money. We're trying to help members help themselves."

For about a year now, both co-ops have offered MyMeter, a web portal co-op members can use to track and chart daily kilowatt-hour use, compare it with similar homes in their area, and set goals for reductions. "MyMeter is a great tool that complements all of our efficiency programs by allowing our members to actually see results of their efforts," Tollerud suggests.

Sonja Bogart, Wright-Hen-nepin vice president for customer service, sales & marketing, indicates that people can't really conserve energy if they don't understand how they're using it. "That's why MyMeter was so important to us. What we've tried to do with The Littlest User contest is add an extra dimension to that knowledge, as well as create some buzz."

She concludes: "Saving energy is a heck of a lot more fun than losing weight. You can still eat chocolate cake."

year," explains Pat Tollerud, Lake Region Electric customer service supervisor. All of the families were given a P3 International Kill A

Coal plants would install MPC instead of scrubbers, catalytic converters, and activated carbon injection, at a cost of \$30 million compared to "hundreds of millions." Cotter uses a 500-MW generation unit as an example. "For \$30 million, a G&T might be able to avoid \$300 million in upgrades, a 90 percent savings."

## PROVIDING BREATHING SPACE ON CLEAN AIR

NRECA's Cooperative Research Network (CRN) believes generation and transmission co-ops (G&Ts) that own older coal-fired power plants may be able to keep them operating longer and save millions of dollars in environmental compliance costs by installing multi-pollutant control technology (MPC). The concept will head to a testing phase hosted by San Miguel Electric Cooperative, a G&T in Jourdan, Texas, in August.

Six other G&Ts—Arizona Electric Power Cooperative in Benson, Ariz., Hoosier Energy in Bloomington, Ind., Western Farmers Electric Cooperative in Andarko, Okla., Great River Energy in Maple Grove, Minn., Tri-State Generation and Transmission Association in Westminster, Colo., and Associated Electric Cooperative in Springfield, Mo.—have put up \$75,000 each, with vendors agreeing to loan about \$15 million worth of equipment, according to CRN Program Manager Andrew Cotter.

"MPC essentially combines technologies that curb sulfur dioxide, nitrogen oxides, and mercury emissions," he explains. "The idea is that if we can manage all three pollutants together, there's the potential for synergy—the whole will be greater than the sum of the parts."



Because MPC is not state-of-the-art, it won't reduce emissions as much as more expensive, tried-and-true solutions. But it will allow many older plants to meet U.S. Environmental Protection Agency (EPA) clean air standards, at least for a few years.

"Even if MPC can help a coal-burning power plant achieve just five years of additional operation before EPA potentially tightens its rules, the facility immediately becomes profitable and cost-effective compared with adding tighter controls or moth-

balling it and building new natural gas combined-cycle generation," comments CRN Executive Director Ed Torrero.

Placing scrubbers on the 9,000 MW of G&T-owned coal-fired capacity without them would cost \$9 billion, Torrero notes. "By comparison, using MPC, our vendors estimate the corresponding price tag at \$1.5 billion—a savings of \$7.5 billion."