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November 6, 2018

MEMORANDUM

- TO: Power Committee Members
- FROM: Ben Kujala
- SUBJECT: Briefing on PNGC Power Marketing Insights

BACKGROUND:

- Presenter: Greg Mendonca, Vice President of Power Supply, PNGC Power.
- Summary: Greg will present to the Council an "on the ground" perspective on the current state of the market in the Northwest and what the future may hold.
- More Info: See article from PNGC's August 2018 newsletter attached.

PNGC Power Pulse

August 2018

Inside This Issue

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Avoiding Price Surges

Mid-C day ahead prices soared in July, peaking at an exceptionally high \$220 per MWh. The monthly average came in at \$52.91 per MWh. As electric market participants throughout the Northwest scrambled during this time, PNGC was able to avoid feeling most of the effects of this pricing surge because of a sound purchasing strategy.

"It's amazing how volatile the market can be, especially when weather driven conditions converge with remarkable incidents such as extensive wildfires and natural gas supply issues," said Jeff Kugel, PNGC Power's Resource Analyst. "Pervasive high temperatures across the entire West Coast in July drove customer use and there was a steep demand for electricity, driving prices way up." Jeff went on to explain that PNGC's purchasing strategy is designed to purchase a variety of different blocks of power at various times prior to energy delivery, essentially layering in various power purchases to create a robust portfolio consisting of many smaller purchases, which make up the larger whole. For example, PNGC did have to purchase a small amount of energy in the second half of July during the surge in pricing, at an average price nearly three times the forecasted cost. However, this only raised the weighted average cost slightly due to the fact that 95% of the power portfolio was already purchased for this period at an average price of below \$25 MWh.

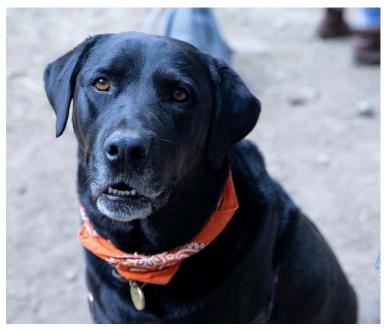


PNGC's purchasing strategy works to balance risk management with the ability to participate in opportunities for low-cost electricity. "July was a great example of how our purchasing strategy can save PNGC members a substantial amount of money," said Greg Mendonca, PNGC Power's Vice President of Power Supply. "Because we'd purchased blocks of power well ahead of time, we were able to protect the Part B Pool from abnormally high wholesale power prices last month. That makes a big difference to our members back home."

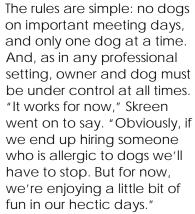
Dog Days of Summer

Studies show that animal companions lower stress and boost the health of their human companions. And researchers say that animal companions like dogs can help buffer the stress of workplaces and boost productivity, too. (One recent study to look at was published in the *International Journal of Workplace Health Management*, although data across studies has bolstered this theory as well. Google provides lots of links.)

While the scientific benefits are inarguable, most can easily agree that the presence of a dog at work is just plain fun. "I usually bring Moby in at least once a week," said Alissa Jackson, PNGC Power's Manager of Accounting, about her 100 lb. Black Lab/Rottweiler rescue dog. "We like to joke that she's a 'dog with a job.' She takes it seriously! She looks forward to coming into work, and I know people look forward to seeing her."



"We've been allowing dogs to come into the office for a little over a year now, and I think it adds a little levity to the office," said Teresa Skreen, PNGC Power's Vice President of Administration. Teresa brings her young Boxer, Flynn, to the office a couple times a week. "People like to stop by and give the pup a pat on the head. And it's nice to be able to bring our furry friends in for the day. I think it's good for morale, and I think the office is better for it."



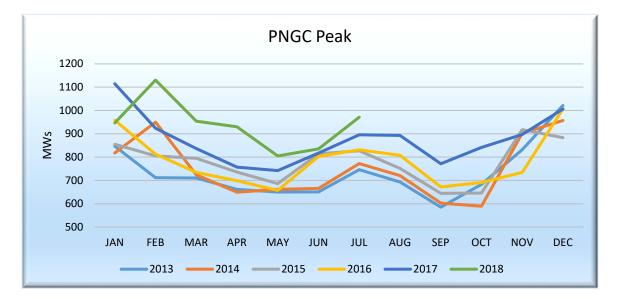
While none of the dogs that come into PNGC are on the payroll, it feels fitting to honor them as the employee spotlights this month. Thank you to all the very good dogs, for all you do at PNGC.



Top: Moby Bottom, L to R: Gus, Kipper, Flynn

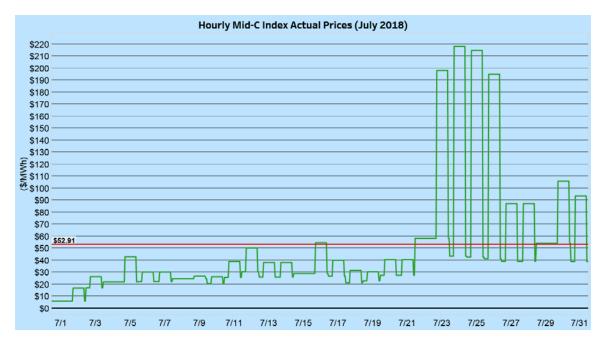
PNGC Peak by Month & Year

The graph below compares PNGC Power's peak demand by month for the last 5 years.



Mid-C Pricing

The graph below shows Mid-C Pricing for the month of July 2018



- August 21 TC-20 Tariff Customer Workshop
- August 22 BP-20 Rate Case Workshop
- August 23 Transmission Planner CFR Customer Workshop
- Sept. 6 Town Hall to Discuss Modernization of the Columbia River Treaty
- Oct. 11 BPA EIM Stakeholder Meeting

Upcoming PNGC Events

- August 17 PNGC Summer Staff picnic
- Sept. 5 PNGC Board Meeting
- Sept. 9-11 National G&T Manager's Association Meeting
- Oct. 1-2 PNGC Power Annual Meeting



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711 NE Halsey St. Portland, OR 97232 (503) 288-1234 www.pngcpower.com About PNGC Power:

PNGC Power is a Portland-based electric generation and transmission (G & T) cooperative owned by 15 Northwest electric distribution cooperative utilities with service territory in seven western states (Oregon, Washington, Idaho, Montana, Utah, Nevada and Wyoming). The company creates value for its member systems by providing power supply, transmission, and other management services. PNGC Power is an aggregator of geographically diverse loads in the region.