

McCULLOUGH RESEARCH

ROBERT F. MCCULLOUGH, JR.
PRINCIPAL

Date: February 11, 2014
To: McCullough Research Clients
From: Robert McCullough
Subject: Energy Northwest's Revised Analysis of the Paducah Fuels Transaction

Recent conversations with the press have provided an update on the calculations now proffered by Energy Northwest regarding the Paducah fuel transaction. Energy Northwest has also distributed a document called "Uranium Tails Transaction" to some parties in the Pacific Northwest.¹

Energy Northwest has apparently accepted a low spot market valuation of the commodities in the Paducah Transaction – \$236,116,561.² This valuation is lower than ours, but may reflect a better recognition of Separative Work Units (SWU) resulting from the United States Enrichment Corporation (USEC) contract. The contract recognized that due to the non-standard feed used in the transaction, the SWUs might not equal the nominal contract amount. This may be the case here.

The primary source of value in Energy Northwest's new valuation methodology is an assumed discount rate for the Tennessee Valley Authority (TVA) payment stream at a rate lower than 3%. We have reverse engineered the discount rate at 2.76% from Energy Northwest materials and have read 2.85% in the media. Both are exceedingly low discount rates and not currently in use at Energy Northwest, Bonneville Power Administration (BPA), or TVA. In fact, this rate is lower than the inflation rate assumption in use at Energy Northwest – resulting in a negative real discount rate. This would normally be viewed as an error in calculation rather than a serious estimate.

In politics, it is often the case that when you miss the goal, you change the location of the goal posts.

¹ Ridge, Brent. *Uranium Tails Transaction*. Energy Northwest. 3 Feb. 2014.

² Ibid. Page 2.

A review of other contemporary nominal discount rate assumptions at Energy Northwest, BPA, and TVA is as follows:

March 2011 TVA Resource Plan:	9.0% ³
March 2012 2014 Hydro Asset Strategy:	12.0% ⁴
April 26, 2012 Board Presentation:	12.0% ⁵
May 10, 2012 Board Presentation:	12.0% ⁶
May 17, 2012 BPA Press Release:	12.0% ⁷
Dec. 5, 2012 BPA Wind Proposal:	9.0% ⁸
Mar. 27, 2013 EN CGS Presentation:	12.0% ⁹
Apr. 11, 2013 NWPP Market Assessment:	13.0% ¹⁰
May 2, 2013 BPA/EN CGS Spreadsheet:	12.0% ¹¹
Nov. 2013 EN's IHS CERA Report:	8.1% ¹²

This is clearly not an exhaustive list. However, it does indicate that the low 2.85% discount rate is not characteristic of Energy Northwest, TVA or BPA studies and has been adopted in this case in order to achieve a specific result.

The selection of an arbitrary discount rate increases the value of the TVA payments from the \$340 million used in presentations to the Energy Northwest board to \$622 million – without explanation or justification.¹³ After correcting for the arbitrary discount rate, the new Energy Northwest methodology implies a loss of \$135 million dollars: \$711 million minus the current market value of \$236 million of fuel components minus the present value of future TVA payments over the next eight years of \$340 million.

³ TVA. *Integrated Resource Plan TVA's Environmental & Energy Future*. Page D200. The real rate at TVA is 5.5%. The nominal rate is 9% given the 3.5% inflation rates assumed in Energy Northwest's 2014 10 year Strategic Plan.

⁴ U.S. Bureau of Reclamation, BPA, U.S. Army Corps of Engineers. *2014 Hydro Asset Strategy*. Mar. 2012. Page 73.

⁵ Energy Northwest. *2012 Uranium Enrichment Program*. 26 Apr. 2012.

⁶ Energy Northwest. *Tails Fuel Procurement Transaction*. 10 May 2012.

⁷ BPA. *Energy Northwest, BPA save ratepayers millions through nuclear fuel purchase*. 17 May 2012.

⁸ BPA Transmission Services. *Summary of Financial Analysis for BP Wind's PTSA Reform Proposal*. BPA. 5 Dec. 2012.

⁹ Ridge, Brent. *Draft Columbia Generation Station Value Study*. Energy Northwest. 27 Mar. 2013. Page 14.

¹⁰ Dibble, Rachel. *NWPP Members' Market Assessment and Coordination Initiative*. BPA. Page 25.

¹¹ Unknown Author. *CGS Costs for BPA study rev 042513.xls*. Energy Northwest. 2 May 2013.

¹² Makovich, Lawrence et al. *Special Report Columbia Generating Station Economic assessment*. IHS CERA. Nov. 2013. Page 13.

¹³ Ridge, Brent. *Uranium Tails Transaction*. Energy Northwest. 3 Feb. 2014. Page 1.

Energy Northwest's Revised Analysis of the Paducah Fuels Transaction
February 11, 2014
Page 3

We have requested the work papers behind the new methodology. We look forward to a response within the next 45 days.