Archived: Thursday, May 31, 2012 3:41:13 PM
From: Eric M. Robeson
Sent: Monday, November 14, 2011 4:56:00 PM
To: Adam Landry (adam.c.landry@sargentlundy.com)
Subject: FW: Levelized Fixed Charge Rate
Response requested: No
Importance: Normal

See below

From: Mark Hite
Sent: Monday, November 14, 2011 4:20 PM
To: Eric M. Robeson
Subject: RE: Levelized Fixed Charge Rate

Using the LFCR formula below, and a 20 year life, you get 10.13% (.0793/(1-(1.0793^-20)). Mark

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From: Mark Hite
Sent: Monday, November 14, 2011 4:13 PM
To: Eric M. Robeson
Subject: RE: Levelized Fixed Charge Rate

As shown on page 9 of the attachment, Big Rivers' actual 2010 cost of capital was 7.93%. I'd suggest using that rate. It includes interest, depreciation, property taxes and property insurance. Thanks, Mark

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From: Eric M. Robeson
Sent: Monday, November 14, 2011 4:08 PM
To: Mark Hite
Subject: FW: Levelized Fixed Charge Rate
Importance: High

What would this calculation be for Big Rivers

We will be using it in the Sargent and Lundy compliance study

Eric

Eric,

A levelized fixed charge rate (LFCR) is a means of converting a capital investment cost into an equivalent annual amount over the operating period. The LFCR multiplied by the investment cost equals the annual fixed charges. In general, the LFCR includes the return on debt, return on equity, income taxes, property taxes, and insurance since these items are typically related directly to the investment cost. In the case of a cooperative, equity and income taxes would not apply. If we then assume that property taxes and insurance are not significantly different between alternatives (this should be verified), the LFCR for a cooperative would exactly be equal to an annuity factor, or capital recovery factor (CRF). The CRF is a function of the interest rate on the debt and the number of years. For an interest rate of 6.0% (assumed to be equal to the discount rate) and 20 year life, the CRF would equal:

$$[0.06/[1-(1.06^{\wedge}-20)]=0.0872, \text{ or } 8.72\%$$

Regards,

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Adam C. Landry
Professional Engineer of Indiana, Illinois, Alberta
Project Manager

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