Commercial Infrastructure Financial Analysis (CIFA) Model Overview

October 27, 2011

Assumptions

- Rates
  - Discount Rate = 9%
  - Borrowing Rate = 6.97%
  - Construction inflation rate = 1.7%
  - PTP inflation rate = 1%, used on the PTP rate
- Overhead Loadings
  - For the NPV calculation an incremental loading cost of $2 millions per project per year of construction
  - For the embedded rate calculation the average IPR forecasted composite loading percentage of 23% is being used.
- Embedded rate calculation
  - Current $6.0 million = 1% rate pressure, does not inflate over time.
  - Rule of thumb is divided into incremental costs from repayment assumptions by year.
  - Average rate calculations start averaging the first year the project (or if a cluster the first year that ALL projects) are energized and average 5, 10, and 20 years subsequent to energization.
- Subscriptions
  - Base PTP rate = 1.298$/kw-mo, used to calculate subscription revenues.
  - Subscriptions of 5 years and over are assumed to roll over indefinitely

Project Costs Used in Base Case

PROJECT	Energization Date	Reliability Benefit	Direct Cost ($M)	2009	2010	2011	2012	2013	2014	2015
NOS 2008 Projects										
McNary-JohnDay (2011 revision)	02-2012	$20.000	$170.000	$26.307	$62.228	$61.597	$19.868	$0.000	$0.000	$0.000
BigEddy-Knight (2011 revision)	02-2013		$185.500	$2.400	$4.000	$11.100	$90.000	$70.500	$6.500	$1.000
I-5 Corridor Reinforcement	10-2015	$10.000	$341.996	$1.853	$11.827	$6.840	$85.499	$85.499	$75.239	$75.239
Central Ferry - Lomo (2011 revision)	09-2013	$0.000	$90.019	$0.566	$3.231	$3.476	$44.037	$38.709	$0.000	$0.000
NOS 2010 Projects										
CUP (West)	10-2015	$0.000	$115.464	$0.000	$0.000	$0.000	$5.300	$29.300	$40.412	$40.412
NI Reinforcement	10-2015	$0.000	$70.656	$0.000	$0.000	$0.000	$21.364	$35.116	$14.126	$0.050

Model Notes

- Tabs
  - K = Key tab -- Where project assumption are input and NPV and average rate pressure results are reported.
  - PV = Present Value Calculations tab -- Also includes Rate pressure summation and calculations in rows 205-312
  - PVSub = Present Value of Subscription tab -- Annual average MW's are input in this tab
- Inputs
  - Are defined as the light yellow/tan cells.
  - Columns L-O in the K tab are the overall assumptions of the projects that are being assessed.
  - Columns D-G rows 43 &44 in the K tab are inputs for what year the average rate pressure will start calculating.
  - The light yellow rows on the PV tab are where capital expenditures are entered.
- Outputs
  - Are defined as the light blue cells.
  - Columns L-O rows 40-80 display the NPV and average rate pressure results linked from the PV tab.

Editing Inputs

- Direct Costs
  - Are entered on the “PV” tab. For Cluster 1 enter costs in row 38
  - Construction Term (Years) and First year of Construction on the K tab (Column L Rows 10 & 11) should be set to align with the “Capital Expenditure” spread on the PV tab.
- Subscription MWs
  - Are entered on the “PV SUB” tab. For Cluster 1 enter subscriptions in rows 38-52.
  - Authorized MW can be entered in row 32. They will be included in the subscription MW calculation if this option is turned “on” in the K tab.
  - Eg. Cell L31 is the on/off switch for including authorized MW for Project 1.

Reading Outputs

- Rate Pressure can be found on the “K” tab starting on Cell L51.
- NPV is also on the “K” tab. For Cluster 1 it is in cell L44.

Questions?

- Submit any questions via email to techforum@bpa.gov.
- Additional information on the CIFA is posted at:
  - Overview of Commercial Infrastructure Financial Policy & Process (click here).