

Time Value Considerations for Economic Comparability

Dave LeVee – Principal
PwrCast Inc. Consulting

Intent of Power Plan

“Ensure the regions power supply and acquire cost-effective energy efficiency”

- Cost/efficiency – many perspectives?
 - Ensure customer values achieved;
 - Cost effective;
 - Adequate reliability
- Objective of plan
 - currently measured as least cost w/ *plan risk*

Comparison of Alternatives

Measure of cost effectiveness

- This presentation:
 - Support “apples to apples” comparability between alternatives including capital and operating costs
 - Topic of this presentation; avoid bias based upon financial differences, that inappropriately distort results.
 - Other underlying topics that create distortion should be also addressed.

Finance Differences Among Regional Constituents

- Ownership Differences
 - IOU's (Debt/Equity, Regulatory Oversight, taxable)
 - Public Ownership (~Debt, Internal Regulation, non-tax)
 - IPPs
 - W/ PPAs (High leverage, contracted revenue, taxable)
 - Market sales (High equity, market revenues, taxable)
- Off Balance Sheet Financing
 - Sell/ Lease back or PPA (low lease costs /leveraged, fixed payment obligation on balance sheet/higher equity compensation)

Entity Cost w/ Finance Differences

- Revenue Requirements – CCCT

NPV Revenue Requirement - Investment Cost

- | | | |
|------------------------------|------|-----------------|
| • w/ PPA (take and pay) | 1.0 | *overnight cost |
| • Public (~ 100% debt) | 1.0 | *overnight cost |
| • IOU (50/50 debt/equity) | 1.31 | *overnight cost |
| • Market (40/60 debt/equity) | 1.40 | *overnight cost |

What is the solution?

- Market perspective assumes greatest investment risk, provides consumer latitude to elect options that best suit value/needs through time. Not easily measured since ownership w/ market risk is very sparse.
- IOU's assumes greater level of investment risk than either public ownership or ownership w/ PPA.
- Election of one financing structure eliminates most of the bias however still undermines the real consumer cost by ignoring risk sharing resulting in some distortion.

Other differences not addressed

- Quantifiable
 - Tax and other incentives –discussion for another day, but *significant!* Includes tax credits, accelerated depreciation. Congressional wisdom or political whim; should impact be exploited?
 - Customer values; beyond least cost perspective
- Non-quantifiable
 - Non-internalized environmental
- Other.....