

## Chapter 6: BIC Ratio Method

- Conventional BIC Method: with PW

$$BIC = \frac{PW(B)}{I + PW(O\&M)}$$

- Modified  $\sim \sim \sim \sim \sim$

$$BIC = \frac{PW(B) - PW(O\&M)}{I}$$

- Conventional  $\sim \sim \sim \sim \sim$  AW:-

$$BIC = \frac{AW(B)}{CR + AW(O\&M)}$$

- Modified  $\sim \sim \sim \sim \sim$

$$BIC = \frac{AW(B) - AW(O\&M)}{CR}$$

→ Conventional BIC ratio <sup>with</sup> IPW, salvage value included

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$$BIC = \frac{PW(B)}{I - PW(S) + PW(O&M)}$$

Modified ~ ~ ~ ~ ~

$$BIC = \frac{PW(B) - PW(O&M)}{I - PW(S)}$$

⇒ Proof in P 251

If there are **disbenefits** :-

Conventional Benefits - Reduced

$$BIC = \frac{AW(B) - AW(D)}{CR + AW(O&M)}$$

~~Modified~~ Cost increased

$$BIC = \frac{AW(B)}{CR + AW(O&M) + AW(D)}$$

## Added Benefits Vs Reduced Costs :-

• let  $B = AW(B)$

$C = AW(\text{Costs})$

$X = AW \text{ of cash flow (A.B or R.C)}$

$(P(A, P, i, N))$

cost of project



maintain

Difference Between  $\uparrow$  Costs of new project  
& old project

• Then : If  $X$  is A.B

$$B/C = \frac{B+X}{C}$$

If  $X$  is R.C

$$B/C = \frac{B}{C-X}$$