PROMOD Economic Analysis

Latest Baseline and Sensitivity Results
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Chris Hagman

Transmission Planning Engineer

Introduction

- Baseline PROMOD economic analysis
  - Cost savings for each alternative were optimized
    - Lower voltage transmission constraints were fixed until their capital carrying costs exceeded their production cost savings, i.e. until the fixes no longer paid for themselves
    - Each alternative ended up with between 2 and 4 fixes
  - The production cost savings for each alternative is the average of three random forced outage draws

Baseline Results

- Compare the carrying costs for each alternative to the "production cost" savings from PROMOD

Baseline Costs for each Representative Project–Results From July 2005

Project	Total Capital Costs (2005 Dollars in Millions)	Approximate Annual Carrying Cost (2005 Dollars in Millions)	"Production Cost" Savings Relative to the Base Case (2005 Dollars in Millions)
Base Case	$0	N/A	0
Low Voltage	$33	$3.0	$8.5
South: Byron–NMA	$186	$16.7	$10.6
Southwest: Salem–NMA	$352	$31.7	$9.2
South: Paddock–Rockdale	$69	$6.2	$9.0
West: Prairie Island–Columbia	$640	$57.6	$9.0

Sensitivity Analyses

- Customer/Stakeholder sensitivity priorities
  - High natural gas and oil prices—20% increase
    - Baseline natural gas forecast from the EIA
  - Combustion turbine bids increased by $50 to partially simulate a constrained market
  - Three Wisconsin nuclear units out
  - Elm Road 3 added

Sensitivity Results

- Compare the carrying costs for each alternative to the "production cost" savings from PROMOD

Sensitivity Results for each Representative Project–Results From July 2005

Project	Annual Capital Carrying Cost (Mil. 2005 $)	"Production Cost" Savings Relative to the Base Case (Millions 2005 Dollars)				
		Baseline	High Natural Gas	$50 Comb. Turbine Bid Up[1]	WI Nukes Out	Elm Road 3 Added
Base Case	N/A	$0	$0	$0	$0	$0
Low Voltage	$3.0	$8.5	$10.0	$9.9	$22.5	$4.8
South: Byron–NMA	$16.7	$10.6	$12.2	$13.2	$30.8	$6.3
Southwest: Salem–NMA	$31.7	$9.2	$10.1	$12.2	$29.0	$5.8
South: Paddock–Rockdale	$6.2	$9.0	$10.9	$10.6	$26.4	$5.1
West: Prairie Island–Col.	$57.6	$9.0	$10.6	$10.4	$29.1	$10.6

[1] For Combustion Turbines (CTs) within the ATC footprint.