

Portfolio Management: Thinking About Risk

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What are the risks?

- Familiar old risks
 - Fuel cost increase
 - Capital cost increase
 - Economic conditions/ demand for product
 - System reliability
 - Environmental costs
 - Abnormal weather events
 - Adequate capacity



New Risks

- New Risks in Competitive Markets
 - Market price volatility
 - Market manipulation
 - Resource Adequacy
- Default Service Risk
 - Having all load subject to same/ or nearly same contract period
- System Security/Terrorism



How Much Risk Are You Willing to Accept?

- You must decide: How much risk are you willing to accept on behalf of your ratepayers?
 - Risk manifests itself in costs.
 - What rate volatility is acceptable?
- Pre-restructuring we used Long Term Integrated Resource Acquisition
 - IRP
 - Generation Expansion Planning



Diversification

- Don't put all your eggs in one basket
- Diversify
 - By length of commitment
 - By amount of load subject to any single arrangement
 - By resource type
 - By use of Financial as well as Physical assets



Risk Management Options

- Long Term Portfolio – 15 year outlook
- Multiple, overlapping arrangements
- Diversified Resources (Physical)
 - Contracts for output of plants
 - Ownership of power sources
 - Energy Efficiency (Reduce volatility of demand)
 - Renewable resources (No fuel cost, low enviro risk)
- Financial Hedges
 - Need to turn into physical asset at some point
 - Unlike other commodities, we can't tolerate shortages



Sample Portfolio

<u>% Forecasted Need</u>	<u>Commitment Length</u>	<u>Resource Time Needs</u>
10%	Spot Market	
10%	2 year	
10%	4 year	efficiency
20%	6 year	
20%	8 year	
10%	10 year	
10%	15 year	renewables
5%	20 year	
5%	30 year	



Agenda for PM Advocates

- Why portfolio strategies should be used.
- How to assess risk.
- How to hedge risk.
- Role of energy efficiency and renewable resources in hedging risk.
- Linking EE and Renewables (SBC &RPS) to the economic analysis



PM Agenda (2)

- Reducing standard offer/default service risk through portfolio management.
- Simplified but accurate cost comparisons
- Immediate Activities
 - Executive dialogue
 - National Conference