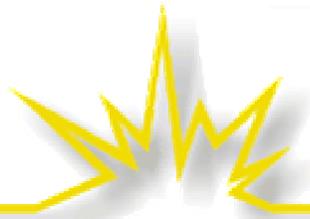


Distribution System Reliability and Performance Standards

Massachusetts Restructuring Roundtable

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The Regulatory Assistance Project

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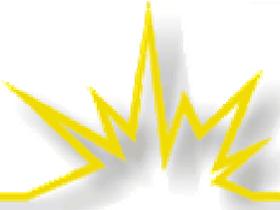


Introduction

Regulatory Assistance Project

RAP is a non-profit organization, formed in 1992, that provides workshops and education assistance to state government officials on electric utility regulation. RAP is funded by the Energy Foundation, the US EPA and the US DOE.

Richard Sedano was Commissioner of the Vermont Department of Public Service, 1991-2001, and presently serves on the Montpelier Planning Commission



Reliability – What Customers Want

- Reliable High Quality Service without Frequent Interruptions
- Restore Service Quickly after a Power Outage
- Regulation influences reliability performance
 - ❖ Capital budgets
 - ❖ Equipment maintenance
 - ❖ Right of way maintenance
 - ❖ Non-wires reliability solutions



Regulatory Tools

- Performance standards
- Incentives
 - ❖ Public recognition or embarrassment
 - ❖ Financial
 - ◆ Shareholders
 - ◆ Employees
- Align public and private interests



Performance Standards

➤ Industry Standards

- ❖ System/Momentary? duration/frequency? customer weighted?

 - ◆ i.e. System Average Interruption Duration Index (SAIDI)

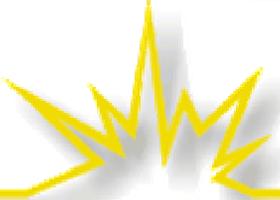
- ❖ Standards vary among utilities (settlement, weather)

➤ Inconsistent practices

- ❖ For example, some count all occurrences, while others throw out brief interruptions or storms, focusing on more significant inconveniences within normal expect.

- ❖ Which approach? Just understand priorities and objectives and agree

➤ Exceptions (identify worst performers, causes, remedies, if appropriate)



Incentives

➤ Targets

- ❖ Good performance or stretch?

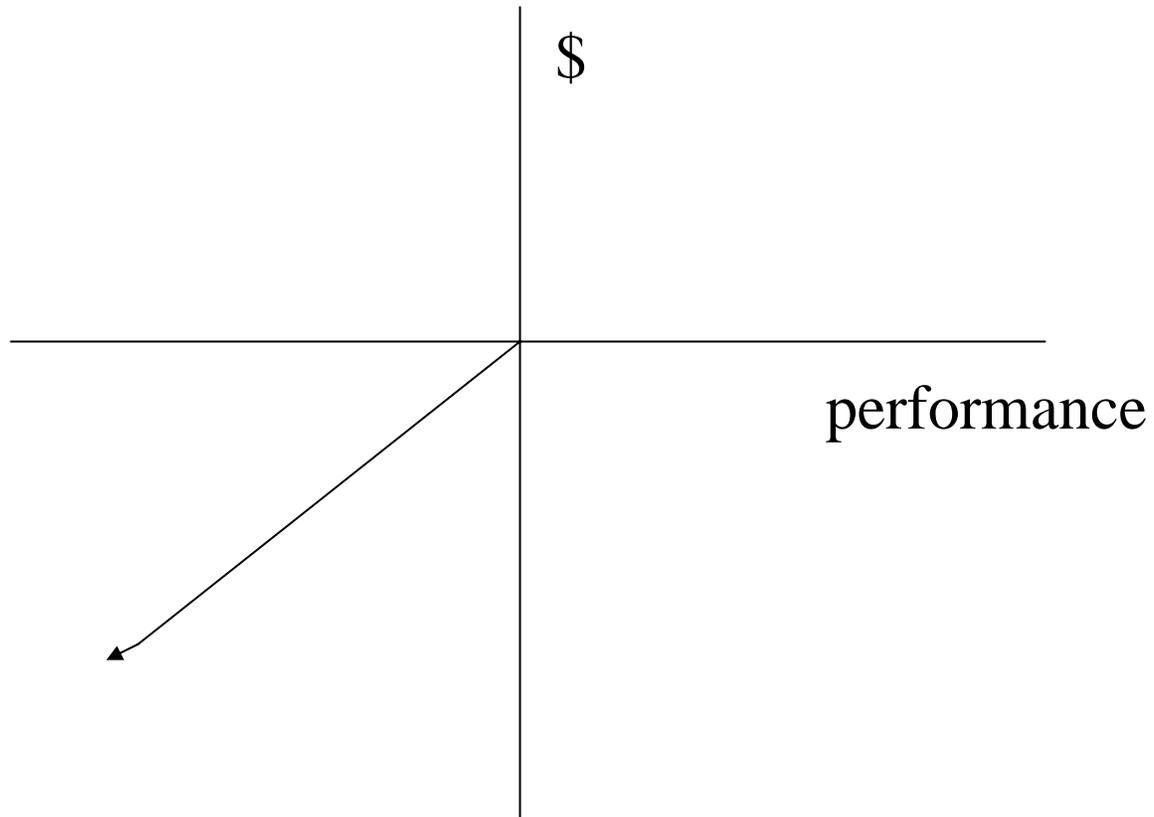
➤ Penalties

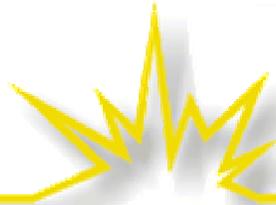
- ❖ Could accelerate at inferior levels
- ❖ Hard to confer on specifically affected customers

➤ Rewards

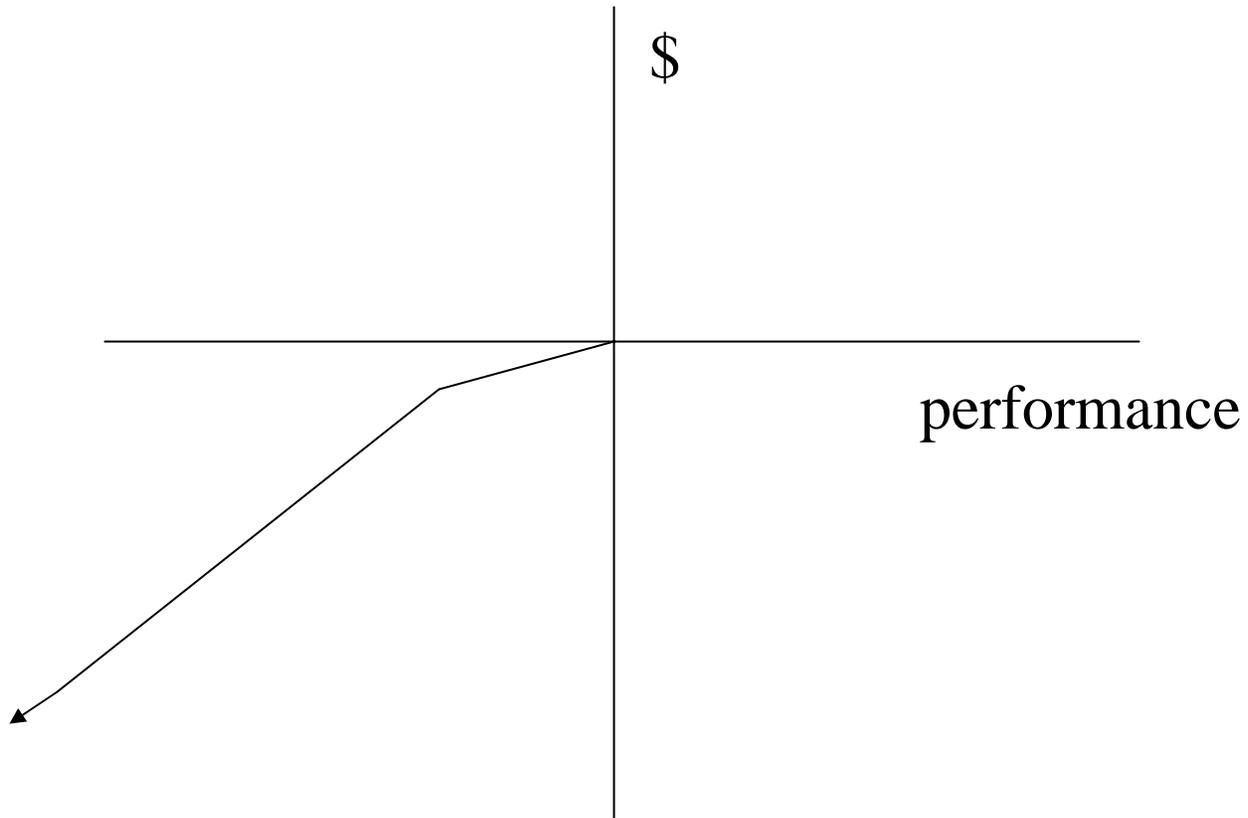
- ❖ Positive reinforcement helps to focus company (employees, management, merit pay) on excellence and customer value outcomes, not “just good enough” (good parenting)
- ❖ Limit reward – diminishing returns

Simple Penalty

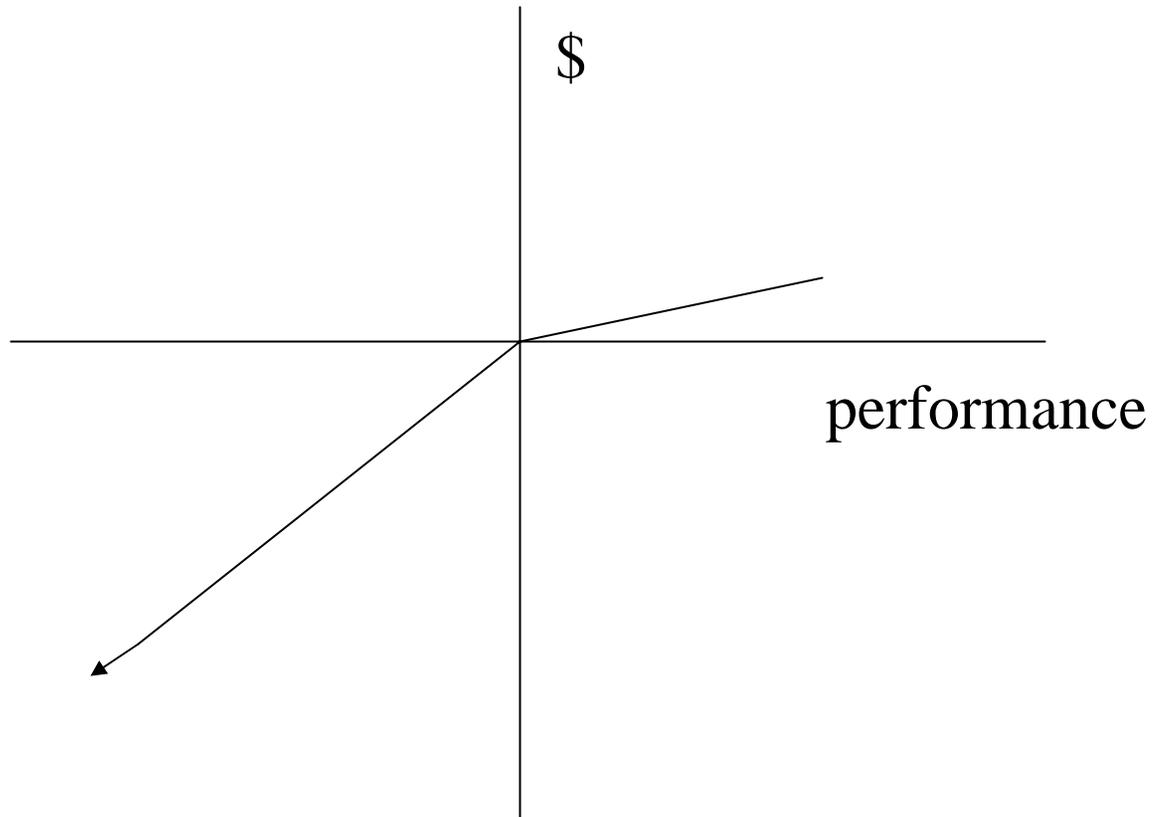




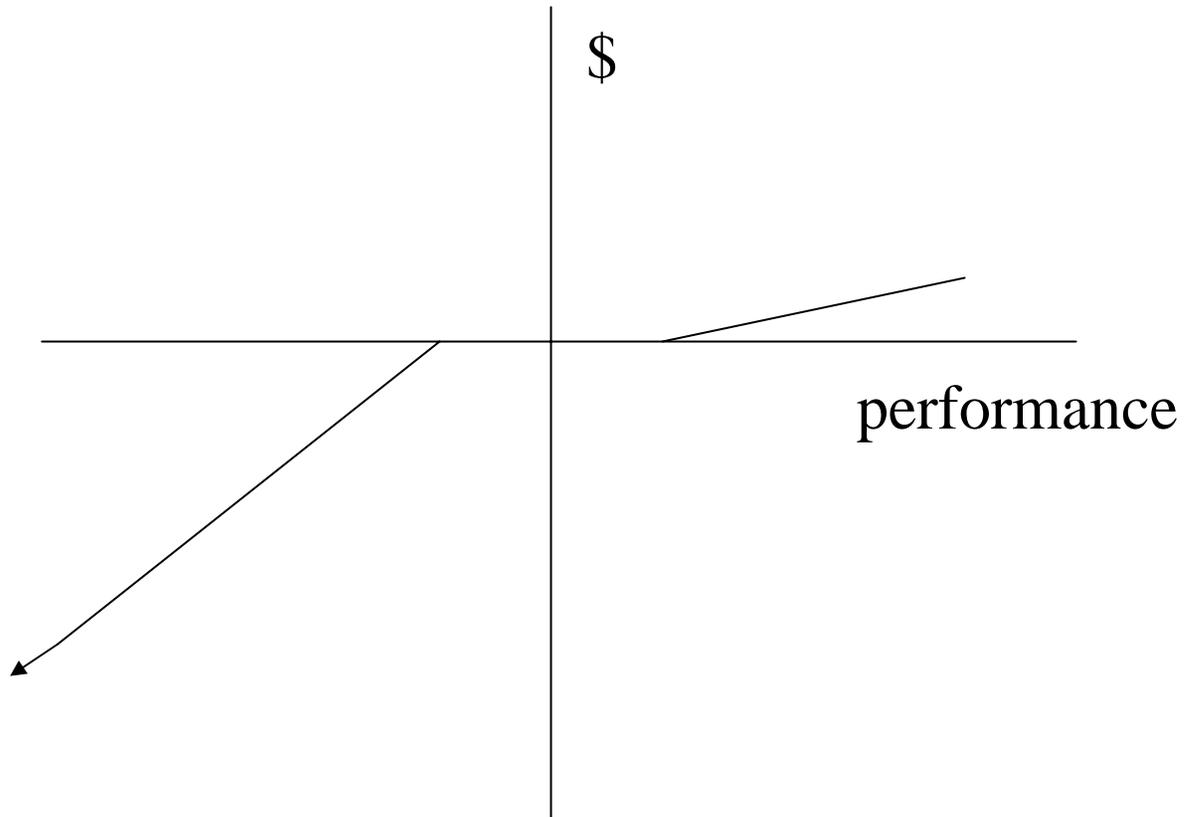
Penalty function with a kink

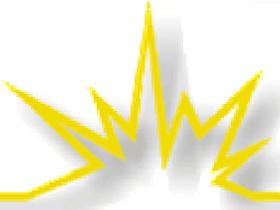


Penalty and Reward



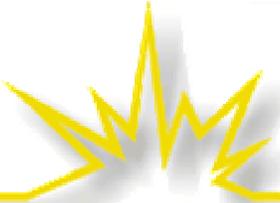
Dead Band





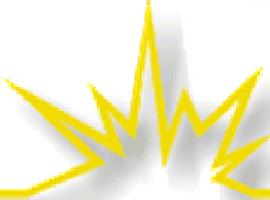
Transition

- Desirable to try out standards without regulatory financial incentives
 - ❖ Decide public priorities
 - ❖ Get management and staff focused on priorities
 - ◆ Employee bonuses
 - ❖ Create a body of data
 - ❖ Abilities of company can be evaluated, standards reset, stretch goals developed



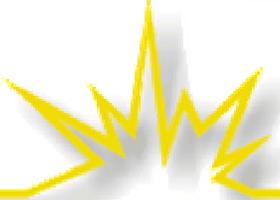
Degree of Regulatory Change

- Add to conventional regulation
 - ❖ In a rate case or periodic single issue adjustment
- Eliminate throughput incentive
 - ❖ Build into formula for periodic rate adjustment
- Must deal with rate adjustment if standards are linked to money



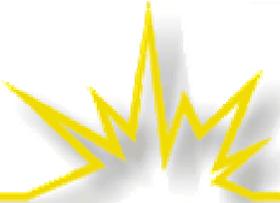
Models

- Energy Efficiency in RI, VT
- Vermont reliability standards
 - ❖ SAIFI, CAIDI calcs defined in PSB rule 4.9
 - ❖ Utility specific targets
 - ❖ Linked to money through “service quality points” with a deadband (max. ~2.5% of net inc.)
 - ❖ See http://www.state.vt.us/psd/Menu/Service_Quality_Plans.htm
 - ◆ For VEC, WEC, CVPS and GMP (also VGS)



Conclusion

- Consumers care about reliability
- Manage what you measure
 - ❖ Regulators should require reliability quality measures
 - ◆ Common definitions, utility specific standards
 - ❖ Linking them to money adds punch
 - ❖ Reward if exceptional performance has value



Thanks for your attention

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❖ RAP Mission: *RAP is committed to fostering regulatory policies for the electric industry that encourage economic efficiency, protect environmental quality, assure system reliability, and allocate system benefits fairly to all customers.*