

## The Glory Mountain State Ski Area

The Glory Mountain State Ski Area – owned and managed by a state public authority - expects to attract 292,500 skier days during the coming ski season. A skier day represents one skier at the mountain for one day. In addition to a \$2,000,000 per year subsidy provided by the state, Glory currently earns its revenue from three sources: lift ticket sales, ski lessons, and food sales in the mountain's lodges. Forty-five percent of the customers come to the mountain on weekends and pay an average of \$60 per day to ski. The remaining 55 percent of the skiers come during the week and pay an average of \$45 per day for a lift ticket. On average, 10 percent of the people who visit Glory take ski lessons. An average person taking lessons pays \$80 for each lesson. Management also estimates that each skier spends an average of \$4 per day on food. Food costs average 40 percent of total food revenue.

Glory's central management staff is paid \$1,800,000 per year. The remainder of Glory's staff is seasonal and is paid on an hourly basis. The table below shows the number of employees by job title, the number of days they work on average, their hourly wages, and the number of hours they work each day. Only ski instructors and patrol costs vary with skier days. Benefits add 30 percent to direct salary costs for all workers including management.

Equipment costs and usage are also shown in the table below. For equipment, number refers to the number of pieces of equipment. Equipment costs depend on the number of days the area is open during the season. The hourly fuel cost represents the cost of fuel to operate the equipment for each hour they are open.

	<i>Number</i>	<i>Days Worked</i>	<i>Hours Worked</i>	<i>Hourly Wage</i>
Instructors & Ski Patrol	275	100	7	\$20.00
Lift Attendants, Maintenance & Grooming	140	130	10	\$18.00
Kitchen Staff	50	130	8	\$12.00
Equipment & Fuel Costs	60	130	6	\$65.00

Insurance costs are \$15,000 per day for each of the 130 days the area expects to be open. Energy costs are \$2,240,000 per year and are based on the number of

days the area is open. Neither energy nor insurance costs vary based on skier days.

*Question 1: You are the Glory Mountain State Ski Area's finance manager. Area Manager Dan Finn has asked you to prepare a base operating budget for the ski area for the coming fiscal year and to show the impact a 5 percent reduction in the number of skier days would have on Glory's operating results.*

In planning for the next season, the State Regional Development Authority, which manages the state's five ski areas, is considering installing a 15-megawatt wind turbine at the top of Glory Mountain. If they do, the ski area will reduce its energy bill by almost 25 percent or \$560,000 per year for the next 15 years. It will cost Glory \$4,100,000 to complete the environmental assessments, do the necessary engineering studies, and install the turbine. In addition, the ski area will have to invest \$750,000 at the end of the seventh year to overhaul the bearings and replace some time-critical components.

For depreciation purposes, the wind turbine has a useful life of 10 years with no residual value. Glory uses straight-line depreciation.

*Question 2: The state uses an 8 percent cost of capital for its ski areas. Based on purely financial analysis, should the state install the turbine?*

In addition, the snowmaking equipment in the Bear Mountain section of Glory Mountain has been in service for nearly 15 years and has reached the end of its useful life. It will have to be replaced before the next ski season. Management has narrowed its decision down to two options: Big Mouth Snow Guns with a useful life of 15 years and the Whisper Quiet Snowmaking System with a useful life of 10 years. The Big Mouth system will cost Glory \$850,000 to acquire and \$35,000 per year to operate, while the Whisper Quiet system would only cost \$600,000 and \$50,000 per year to operate.

If the Big Mouth equipment is chosen, there will be no change in Glory's

other operating costs. If the Whisper Quiet system is purchased, Glory's annual fuel and equipment costs will increase by \$15,000.

Regardless of the option Glory chooses, the snowmaking system chosen will be depreciated over ten years with an assumed 5 percent residual value. Glory uses straight-line depreciation.

*Question 3: Based on Glory's 8 percent cost of capital, which system should management choose?*

Glory Mountain has never offered any type of day care for younger children of skiing families. Given the changing demographics of its patrons, Dan Finn thinks that the Mountain needs to offer those services. Erika Fossett, Glory's director of operations, has worked up a proposal for what she is calling the Glory Kids' Center. She wants it to provide combined day care and ski lessons for children between the ages of 3 and 7. The center would be run by a director who will earn \$60,000 per year plus benefits. For every 10 children using the Kids' Center, the center will employ one full-time instructor. That instructor will provide both day care and skiing instruction. Each instructor will earn \$25 per hour including benefits. The center will provide 8 hours of care per day. Instructors will only be paid for the hours the children are at the center. The children are fed lunch and a snack at a cost of \$10 per child per day. Supplies for activities the children will be engaged in when they are not skiing will cost an average of \$10 per child. Glory plans to charge \$70 per day per child.

*Question 4: As Glory's finance manager, you have been asked to evaluate the fiscal feasibility of running Glory Kids' Center. Your first question is how many children will have to be at the center on an average day for it to be profitable on a stand-alone basis.*

Erika Fossett believes that the Kids' Center will add 6 percent to overall skier

days, and families with children between 3 and 7 will account for 10 percent of total skier days including the expected increase in volume. On average, families with children between 3 and 7 will enroll .25 children in the center each day they ski. She expects to employ an average of 6 instructors each day the ski area is open.

*Question 5: Prepare a special-purpose budget for the Glory Kids' Center. Do not include the incremental lift ticket revenue from the expected increase in the volume of skier days in your estimate.*

After completing these analyses, Dan Finn asks you to update the budget to include the impact of installing the wind turbine, replacing the snowmaking equipment and operating the Glory Kids' Center. In addition, Glory will have to issue a \$6,000,000 bond to finance the acquisition of the equipment. The coupon rate on the bond will be 5 percent. It will require Glory to pay interest every six months and to repay the full \$6 million of principal in 20 years. The bonds will be issued on the first day of Glory's fiscal year, and all equipment will be put in service that same day.

*Question 6: Using the base budget from Question 1 as a starting point, prepare a revised budget for Glory that incorporates all of these initiatives.*

At the end of the season, bad weather caused the mountain to be open for only 115 days with an average of 2,600 people per day and an average price per lift ticket of \$50.50.

*Question 7: Starting with the revised budget, calculate the following lift ticket revenue variances and indicate whether they were favorable or unfavorable. Be sure to add up the flexible (partial) variances and check to make sure that sum equals the total variance.*

- a. *Glory's total lift ticket revenue variance for the ski season*
- b. *the portion of the lift ticket revenue variance that was due to volume of days*
- c. *the portion of the lift ticket revenue variance that was due to quantity of skiers per day*
- d. *the portion of the lift ticket revenue variance that was due to price*