Downtime Calculator Purpose

The calculator uses an excel spreadsheet to custom enter data for all areas of a company's normal operation cost and production schedule. All custom fields are highlighted in yellow. The spreadsheet automatically calculates changes as they are made to the spreadsheet.

"Five Nine's" (99.999%) of uptime is the newest buzz word in the business world today. This calculator can assist a company in determining just what "Five Nine's" can save their company and to evaluate if it's even possible to achieve. When your company's data are entered spreadsheet it can be determined what percentage of uptime your facility should maintain for the best profitability.

The calculator uses ONLY labor, overhead, production and income in the calculations. No outside cost to repair or replace equipment is used in the calculations.

The percentage of uptime should be based on your company's past history of equipment outages from normal operations and utility power failure. Naturally when the utility power fails for the facility everyone is affected except where an uninterrupted power source would be in place. Even a backup generator has some time frame of electrical outage before power is restored. If the backup generator does not serve the entire facility some areas are still without power until the electrical utility power is restored. Typically equipment failures inside the building will occur more frequently than the electrical utility will fail.

Most of the electrical utilities SPGS researched typically provided service on an average of 99.5%. SPGS used one company's utility history over a seven (7) year span that had an electrical utility average of 99.63% uptime. This is just a little better uptime number then the average of 99.5%.

The sample company's spreadsheet shows an average loss per year, just downtime from the utility, was $37,000 a year from labor and $199,800 from lost production. The total loss for ten years because of utility failures would be $370,000 labor and $1,998,000 from production loss. The spreadsheet also shows the percentage of gross profits these losses cost the sample company.

Many different power disturbance studies over the years have stated consistently that utility failures account for about twenty percent (20%) of all equipment outages and failures; the facilities wiring and equipment account for the other 80% of outages and failures. Using that data as a factor for calculating losses then this sample company would average another $148,000 loss from labor and another $799,200 from production due to failures other than the electrical utility each year.

The total loss for ten years because of electrical utility failure would be $370,000 labor and $1,988,000 from production loss. The sample company's total losses from non utility failures over the ten year period would be $1,480.000 labor and $7,992,000 from production.

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When we add the numbers together we get a loss of $1,850,000 from labor and $9,990,000 form production loss. Over the long period of time it is very apparent that the best thing to do is invest some of these future loss dollars into methods of preventing these failures in the first place. ***Please remember the actual sample company on the calculator spreadsheet template only has uses documented electrical service downtime from the utility company.***

Please utilize the calculator and discover what level of uptime your company should for maximum profit margins. The calculator clearly shows downtime will cost your company money and lost profits. Once the downtime percentage is discovered it is clearly shown that when the outage occurs the money and profits are gone.

SPGS believes that the calculator should be used as an investment tool. If nothing is done to prevent the downtime than these losses will continue as they have had in the past. One might call this a cost of doing business. However; if preventive measures are put in place to reduce or eliminate downtime losses the downtime percentage will raise toward the "Five Nine's" of service and profits will go up. One might call this a method of doing business.

Choices can be made as to what areas within the facility are most critical and protect those areas. If one elects to do nothing to prevent the downtime then these losses will continue to occur. If downtime was listed in the yearly budget as a fixed line item cost most decision makers would review and challenge the need for these costs and at least suggest reducing these costs during normal or abnormal budget cycles.

"Five Nine's" of equipment service uptime is probably a financially impossible goal for the total facility. However; it is up to the decision makers to determine what level of uptime is probable and affordable within critical areas of the facility. SPGS believes using this spreadsheet clearly shows downtime is very expensive. SPGS has the experience and service capabilities that can assist your company in reducing your downtime and increasing your profits.

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SPGS Downtime Calculator Instructions

Data Fields

Fiscal Year: Enter the fiscal year desired for the calculation.

Gross Profit Margin: Enter the Gross Profit Margin the company typically maintains.

Total Labor Cost Per Year: Enter the company's total labor cost for all employees.

Total Overhead Cost Per Year: Enter the company's total overhead cost per year.

Total Production Value Per Year: Enter the company's total production output value per year.

Total Other Income Value Per Year: Enter the company's total sales or service income per year.

Total Custom Value Per Year: The Total Custom Value Per Year Field can be changed to any wording that the company wishes to enter. The field should only be used for any type on income that would stop because of an equipment outage. In any case the value should only be used if the production value field and the income value field are not covering this value already.\

Work Days in a Year: Enter the number of work days in the company's work year.

Work Hours in a Day: Enter the number of work hours in the company's work day.

Work Days in a Week: Enter the number of work days in the company's work week.

Number of Locations: Enter the number of locations the company has.

Percentage of Up Time Desired: Enter the percentage of uptime the company desires.

Percent of People at Sites Affected by the Downtime: Enter the percentage of people affected by the downtime.