The company will realize a net benefit of $13 million over three years by implementing the Tier III data center. A Tier III data center provides multiple active power and cooling distribution paths. The benefit of implementing the Tier III data center is our availability will go from 99.67% to 99.98%, reducing the costs associated with downtime.

A key capability of running a Tier III data center is that it is concurrently maintainable. Running the Tier I data center does not provide us with the highest availability because of the non-redundant capacity components and the non-redundant distribution path. Tier III data center provides additional capacity components and multiple independent distribution paths serving the computer equipment at any time, providing redundancy (Seader). In addition, the Tier III allows any unplanned maintenance activity of power and cooling systems to take place without disrupting the operation of computer hardware located in the data center (Colocation America). Using a Tier I, most site infrastructure systems will be required to shut down affecting systems, and end users. Also, the site is susceptible to disruption from both planned and unplanned outages (Turner). Tier III being concurrently maintainable will improve our efficiency and increase performance, reducing the 28.9 hours of unplanned outages to 1.6 hours per year.

After the initial investment of $35 million, the company will realize a net benefit of $13 million over the next three years. We are losing $25 million every year by running the Tier I data center. Due to the 10 unscheduled outages we have had in the past year, we were unable to process orders, make the product, or ship the product to our customers. By implementing the Tier III data center, we are saving $48 million over the next three years.

Works Cited

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|  | Year 1 | Year 2 | Year 3 | Total |  |  |  |  | Tier 1 |  | Tier 3  |
|  |  |  |  |  |  |  |  | hours (unplanned outages) | 28.8 |  | 1.6 |
| Costs | $35,000,000  | $0.00  | $0.00  | $35,000,000  |  |  |  | minutes | 1728 |  | 96 |
| Benefits | $0.00  | $24,000,000  | $24,000,000  | $48,000,000  |  |  |  | cost/minute | $14,800  |  | $14,800  |
|  |  |  |  |  |  |  |  | Total cost per year | $25,574,400  |  | $1,420,800  |
|  |  |  | Net Benefit: | $13,000,000  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  | Saving per year | $24,153,600  |  |  |
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| --- | --- | --- | --- |
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