Chaimaa Elmalhi

**Data Centers and Networking**

 Building a Tier III data center to replace the current Tier I data center will generate a net benefit of $181,849,600 over a three-year span. Tier III data center specifications are utilized by larger businesses because of its low downtime and backup system (N+1). Tier I data center has an availability of 99.67% which resulted in 10 outages over the past year, while a Tier III center will bring up that percentage to 99.98%.

 A Tier 3 data center has redundant capacity and data center infrastructure components.

With the Tier III data center, the infrastructure will have all equipment dual-powered with multiple independent, cooling distribution paths powering the equipment at all times. Maintaining and repairing the equipment can be done without disruption.

With the redundant and always active power supply, there is minimal planned and unplanned downtime. It guarantees 99.982% availability with less than two hours of downtime per year.

 The cost to build the Tier III data center will be $35,000,000. The benefit from savings on downtime is $203,707,200 over three years. A Tier III data center will yield a three-year Net benefit of $181,849,600.

**Work cited**

N. (2016, November 04). Identifying Data Center Tier Levels: A Guide. Retrieved October 11, 2017, from <http://www.telehouse.com/2016/05/identifying-data-center-tier-levels-guide/>

What is a Tier 3 Data Center? - Definition from Techopedia. (n.d.). Retrieved October 11, 2017, from <https://www.techopedia.com/definition/29859/tier-3-data-center>

Staff, C. A. (2017, April 19). Data Center Tier Rating Breakdown - Tier 1, 2, 3, 4 - CLA. Retrieved October 11, 2017, from <https://www.colocationamerica.com/data-center/tier-standards-overview.htm>