1. Introduction/Headline
   1. From companies with modest data centers, say 1000 servers, on up to companies where data center OpEx is a huge drain on their margins, the effect on corporate valuation by even small increases in profit margins cannot be over estimated. For data centers, the largest single component of operating expenses is tied closely to the power consumed by the IT equipment housed in the facility. For a few years now, many companies have been working hard to lower their data center OpEx by making their facility and their HVAC (Heating, Ventilation and Air Conditioning) systems more efficient, thereby lowering their overall power bill. Lowering the power consumed by the IT equipment itself has usually been overlooked, usually because facilities and finance teams have been far removed from IT teams, so communication and team work was awkward and often inconvenient. Lately though, the industry has started to think more and more about somehow lowering the footprint of the IT equipment itself, where in fact OpEx reductions by as much as 50% are possible. Successful projects in this category usually require finance and IT teams working together, and managed from an authority high enough to get results from both.
2. Description of problem/pain
   1. The ever increasing compute capacity required by companies has caused an equally increasing bill from the electric company. The main culprit is the IT equipment itself, but managing corporate OpEx or trimming the power consumption of the data center can often be very low on the todo list of an IT manager. Now, the explosion of cloud applications and desire by companies to employ big data analytics to achieve a variety of business goals is putting more pressure on data centers to provide even more compute capacity. But the operating expenses involved in this growth are themselves causing corporate problems, and the physical power consumption is sometimes also a problem. Companies are finding themselves squeezed between these two milestones and needing relief.
3. Description of product and benefit
   1. Servers that consume less power while providing equivalent capacity.
4. Table/chart showing electricity savings

|  |  |  |  |
| --- | --- | --- | --- |
| Servers/yr | 100 | 1,000 | 50,000 |
| Conventional | $42,500 | $425,000 | $21,250,000 |
| Lopoco | $10,500 | $105,000 | $5,250,000 |
| Savings | **$32,000** | **$320,000** | **$16,000,000** |

1. Description of overall savings
   1. Reduction of electricity consumption is just the start of
2. Table/chart showing overall (3 year savings)

|  |  |  |
| --- | --- | --- |
| 20k Servers | $50/watt | $75/watt |
| Conventional | $175,000,000 | $262,500,000 |
| **Lopoco** | $50,000,000 | $75,000,000 |
| Savings | **$125,000,000** | **$187,500,000** |

1. Summary/Conclusion