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## Sustainable Business Practices

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# Introduction

- · Corporations as profit seekers
- Why are they adopting sustainable energy practices?
- Do these help profitability?



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# **Case Studies**





RUTGERS

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- · View computing power differently
- Not about clock speed or memory
- It's about performance per Watt

RUTGERS

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- Moore's Law → Computers get cheaper and faster
- Energy costs follow markets





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 $\frac{\text{Power}}{\text{Server cost}} = \frac{\text{Power}}{\text{Performance}} \times \frac{\text{Performance}}{\text{Server cost}}$ 

"This equation explains why measuring power use, performance, and server costs in a consistent fashion is so important—it allows us to understand the underlying drivers of power per server cost in an unambiguous way. It also shows that whenever performance per server cost is increasing faster than performance per watt, power use per thousand dollars of server costs will increase."

J.G. Koomey, et al. (2009, Aug. 17) Assessing trends over time in performance, costs, and energy use for servers.



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So how is Google doing?

### In their own words:

Google-designed data centers use about half the energy of a typical data center. As a result, the energy used per Google search is very small; to be precise, we currently use about 1kJ (0.0003 kWh) of energy to answer the average query. This translates into roughly .2g of CO2 (for non-metric users, that's 0.007 ounces).

Google, "Efficient computing" Google Data Centers [online] available: http://www.google.com/corporate/datacenter/efficient-computing/index.htm



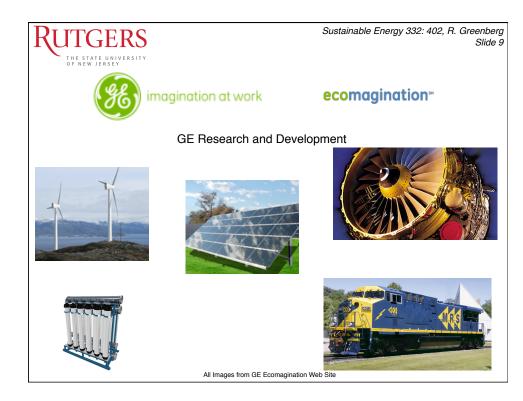
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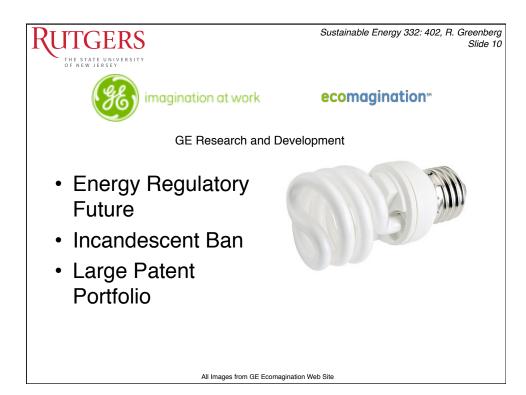


ecomagination\*

"The main social responsibility for a company is to win."
- Jack Welch, former CEO of General Electric

- Advantages of Research and Development
- Public Relations
- Tax Advantages







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## ecomagination\*

### **GE Public Relations**

Television Commercials and Social Media:

- Facebook
- Flickr
- YouTube
- Twitter

### Tax Advantages

### The New york Times

G.E.'s Strategies Let It Avoid Taxes Altogether



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## **Conclusions**

- Going green can be beneficial for a company's bottom line.
- Sustainable energy practices can save companies money, may provide a competitive advantage, make for good public relations, and have tax advantages.
- These are not solely for those who want to save the earth; these practices are for those who want to make money.