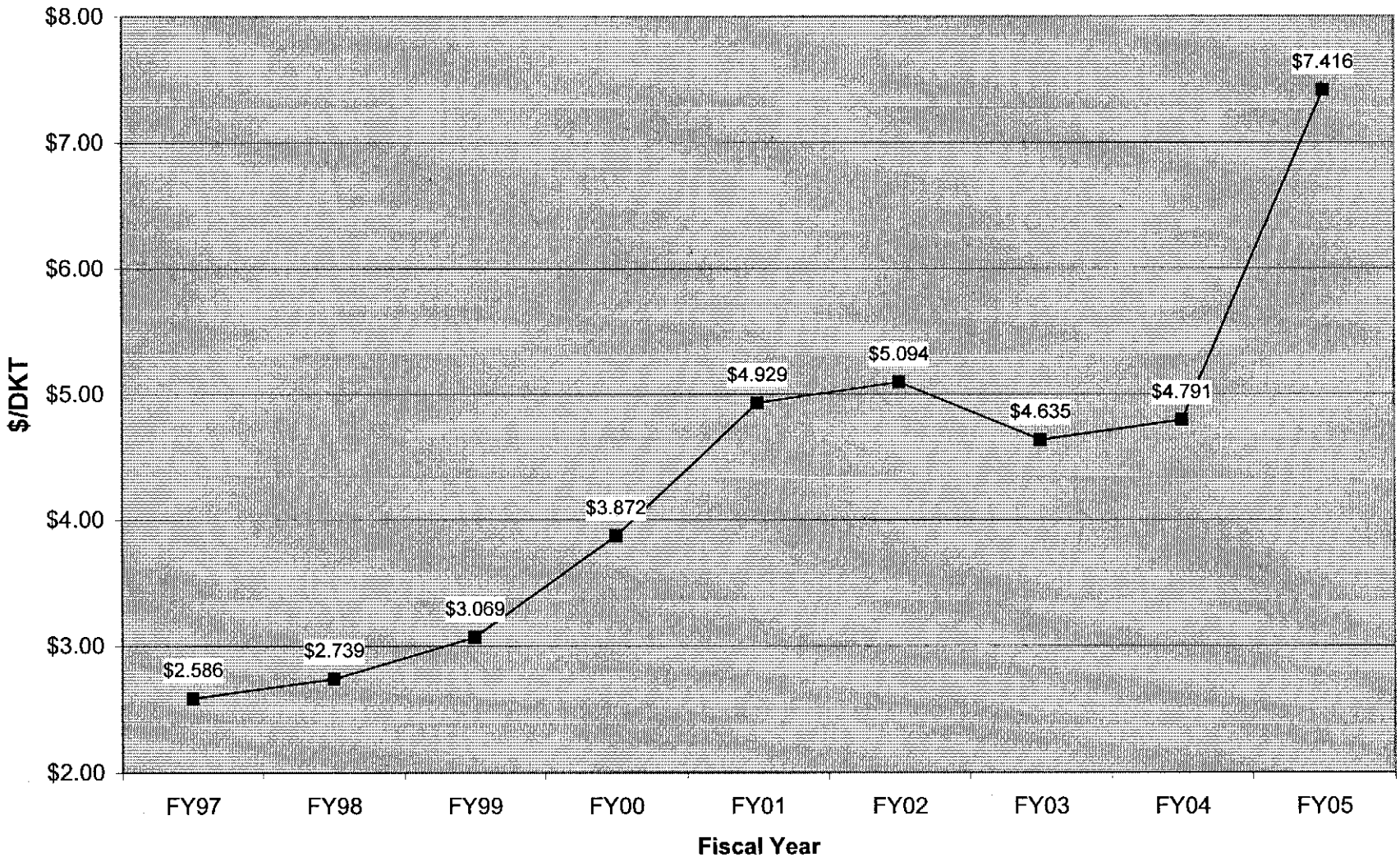
Senate Energy & Telecomm.Comm.
Exhibit No. 2
Date 2.3.05
Bill No. ENFO HRG

MSU Bozeman - Natural Gas Unit Cost Trends



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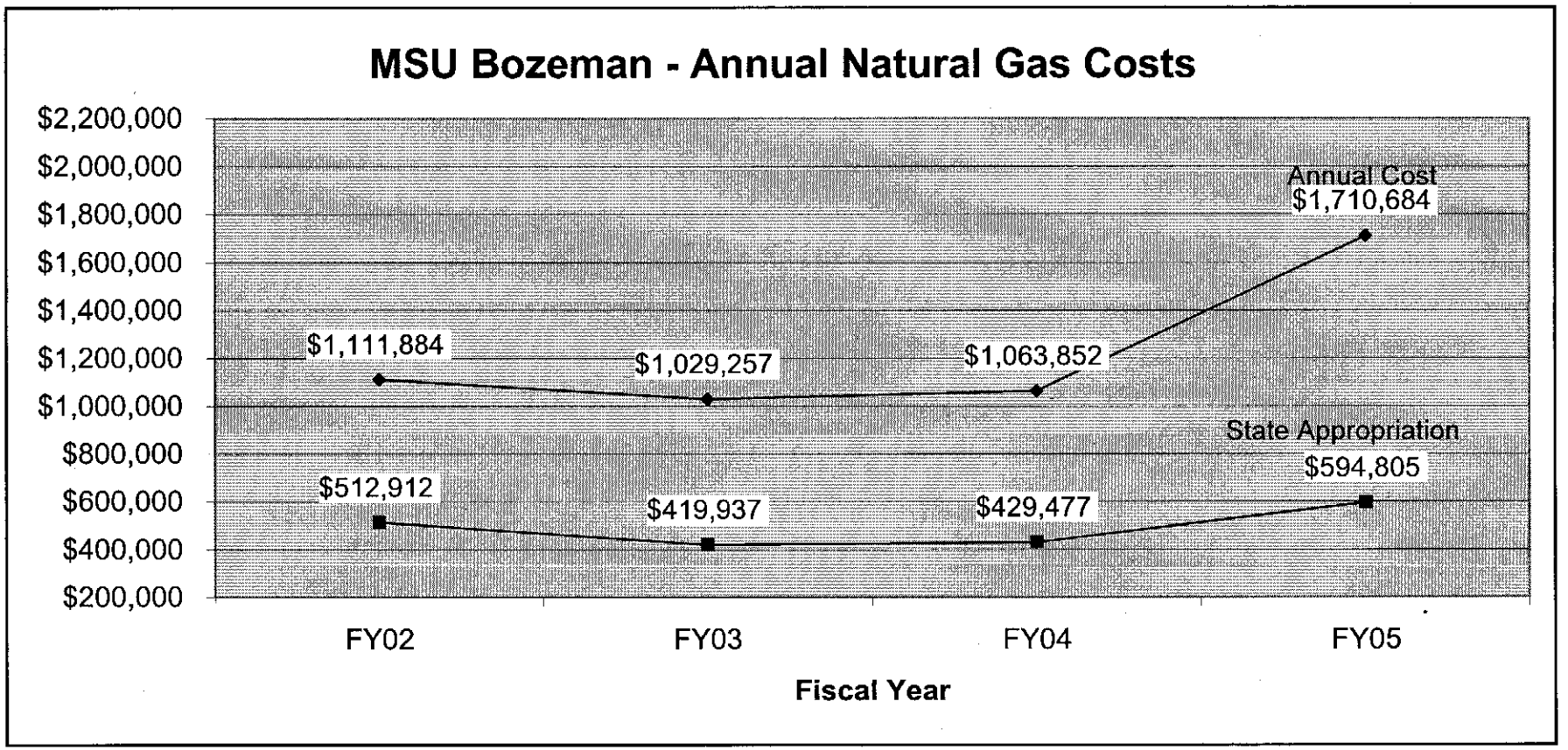
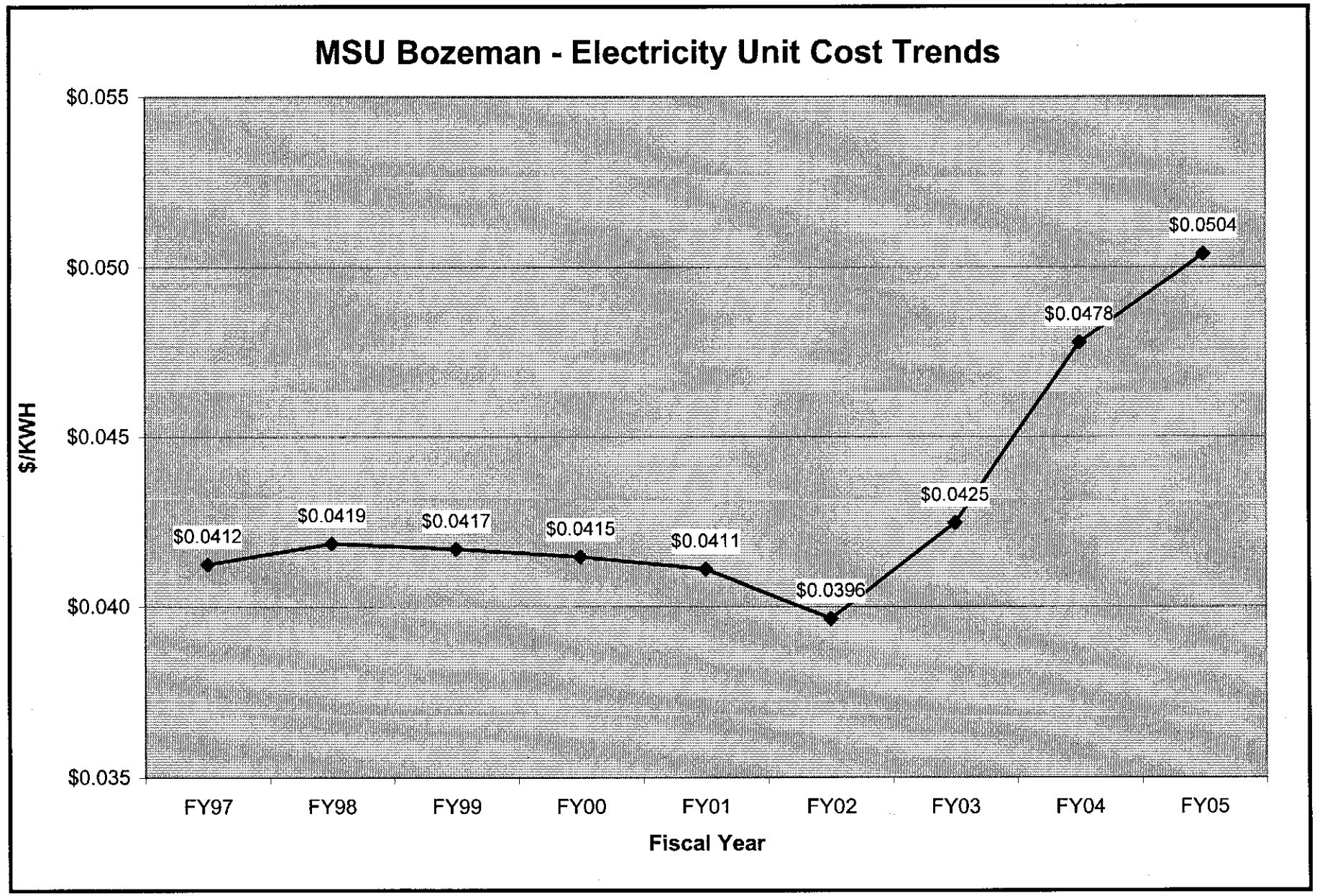
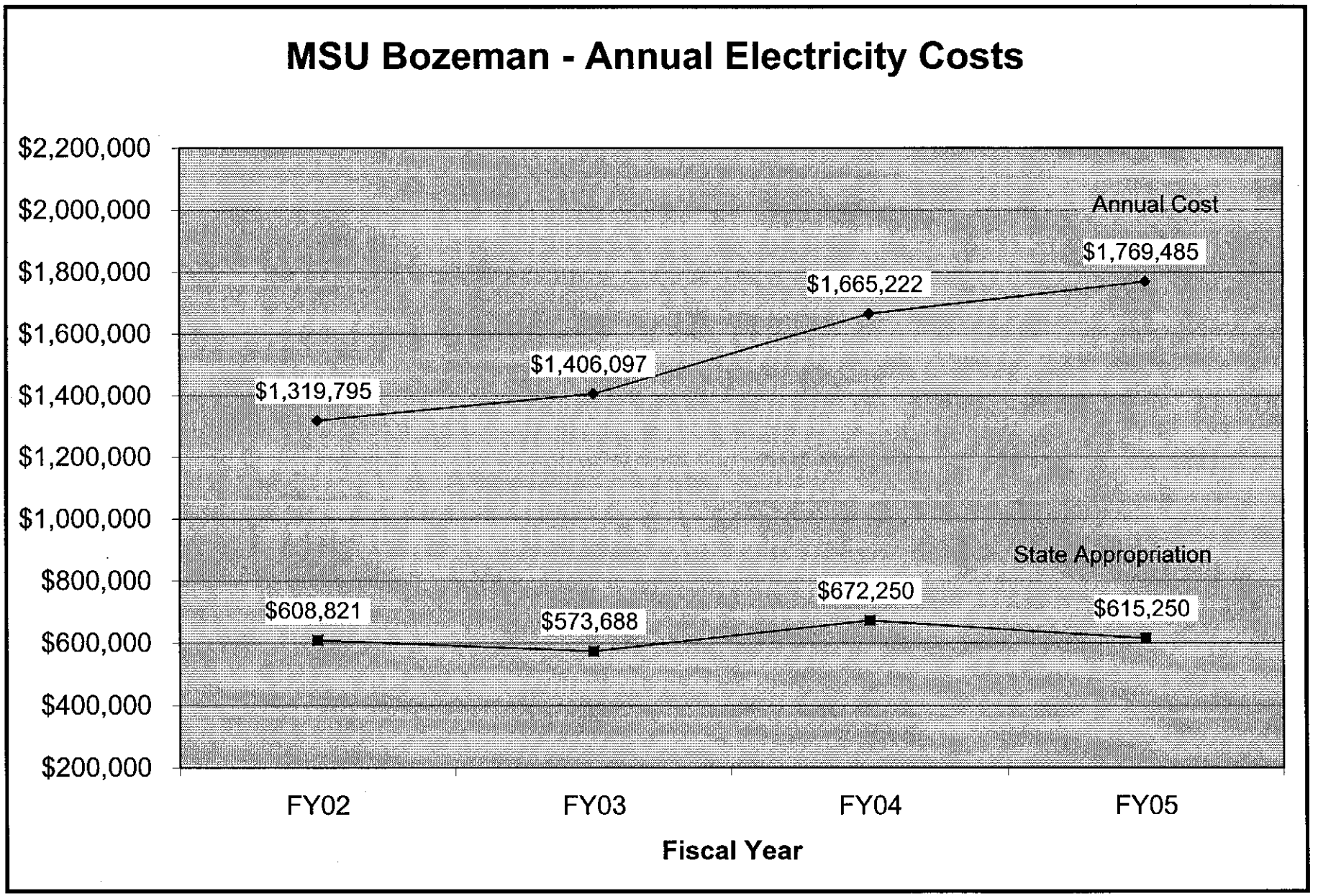


Data Table	FY02	FY03	FY04	FY05
Annual Costs	$1,111,884	$1,029,257	$1,063,852	$1,710,684
	46.13%	40.80%	40.37%	34.77%
Appropriation	$512,912	$419,937	$429,477	$594,805
Appropriation Over/(Under) Costs	($598,972)	($609,320)	($634,375)	($1,115,879)
Appropriation	$958,339	$893,367	$1,056,366	$1,067,485


MSU Bozeman - Electricity Unit Cost Trends
$/KWH
$0.055
$0.050
$0.045
$0.040
$0.035
$0.0412
$0.0419
$0.0417
$0.0415
$0.0411
$0.0396
$0.0425
$0.0478
$0.0504
FY97
FY98
FY99
FY00
FY01
FY02
FY03
FY04
FY05
Fiscal Year


MSU Bozeman - Annual Electricity Costs
$2,200,000
$2,000,000
$1,800,000
$1,600,000
$1,400,000
$1,200,000
$1,000,000
$800,000
$600,000
$400,000
$200,000
Annual Cost
$1,319,795
$1,406,097
$1,665,222
$1,769,485
State Appropriation
$608,821
$573,688
$672,250
$615,250
FY02
FY03
FY04
FY05
Fiscal Year

Conservation, Cost-Saving and other Efficiencies
Montana State University – Office of Facilities Services

As the responsible steward of MSU's utilities budgets, the Office of Facilities Services (OFS) has implemented over ***$3.2 million worth of energy conservation projects*** comprised of heating, ventilating and air-conditioning controls modifications, building envelope improvements, lighting retrofits, and central boiler efficiency improvements over the past two decades.

1. Unique among universities, MSU's Heating Plant annually changes from its standard 24-hour/day winter operation schedule to a 2-shift/day (16 hour per day) summer operation from commencement to the beginning of fall semester. This ***conserves ~$75k+/year*** in utility and labor costs at current energy prices and should pay increasing dividends as energy prices escalate in the future.

2. MSU OFS was a leader in the state in the early 1990's, bidding our own interruptible natural gas contract, *that resulted in gas costs to MSU of **$1.1 million** less than what we would have paid under the regular prevailing gas tariffs paid by other state agencies for the same period.* We continue to purchase gas in the de-regulated market, securing the best, minimum-cost scenarios available from the prevailing market.

3. In 1991, MSU OFS installed an electric co-generation turbine unit in the Heating Plant, which annually contributes 4%+ (in dollar value) of the campus' electricity consumption. To date, the co-generation unit has produced ***over $1.2 million in avoided electricity costs*** during its service life.

4. MSU OFS annually participates in the self-directed Universal Systems Benefit (USB) program, which allows us to self-direct the USB portion of our electric price tariffs, to execute approved energy conservation measures in our facilities. We have aggressively pursued these projects, ***reclaiming ~$50k/year in USB rebates***. The 2003 Legislature extended this opportunity through 2005 (HB509).

5. While MSU's 20-year consumption trends have indicated steady growth in electric usage and demand levels, ***MSU's gross natural gas consumption in recent years has been lower than it was 20 years ago***. Although this comparison is not weather-normalized, the relative use levels still speak positively about conservation efforts in light of the many new facilities that have been constructed during that period (many of which are costly, high-energy-use, high-ventilation-rate science and laboratory type buildings).

6. When MSU replaced its primary electrical distribution system in the 1990's, we tripled the line voltage, which reduced distribution losses and produced commensurate savings.

7. Construction of the MSU Utility Tunnel system allows core utility systems to migrate into the protected tunnel environment as existing systems fail, greatly improving system reliability, expansion flexibility and longevity when compared to the previous direct-buried installations.