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Dr. M. Katherine Banks, Director
Colin Brock, LBB Analyst

Method of Financing	2018-19 Base	2020-21 Recommended	Biennial Change ($)	Biennial Change (%)
General Revenue Funds	$43,192,272	$42,709,092	($483,180)	(1.1%)
GR Dedicated Funds	$887,123	$887,123	$0	0.0%
Total GR-Related Funds	*$44,079,395*	*$43,596,215*	*($483,180)*	*(1.1%)*
Federal Funds	$89,954,656	$107,416,104	$17,461,448	19.4%
Other	$115,130,498	$96,045,465	($19,085,033)	(16.6%)
All Funds	**$249,164,549**	**$247,057,784**	**($2,106,765)**	**(0.8%)**

|	FY 2019 Budgeted	FY 2021 Recommended	Biennial Change	Percent Change
FTEs	842.4	842.4	0.0	0.0%

Agency Budget and Policy Issues and/or Highlights

Texas A&M Engineering Experiment Station (TEES) conducts research, provides continuing education, and develops technology to assist industry and the engineering workforce. TEES performs engineering and technology research on water, energy, manufacturing, and the environment across the state of Texas.

Historical Funding Levels (Millions)
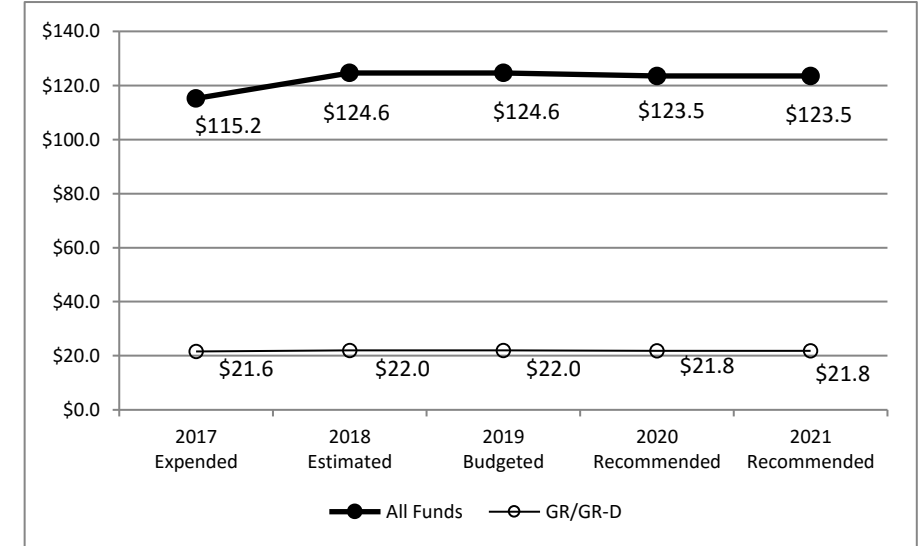
Historical Full-Time-Equivalent Employees (FTEs)
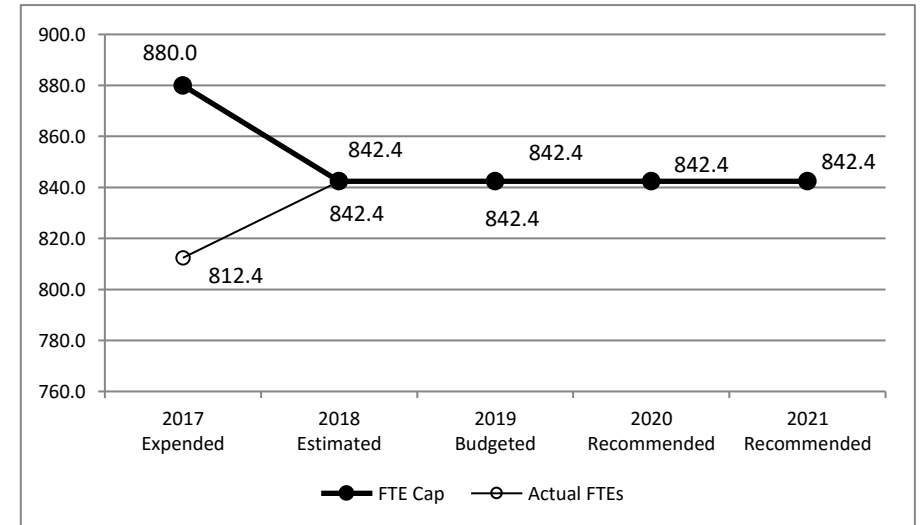
The bill pattern for this agency (2020-21 Recommended) represents an estimated 88.6% of the agency's estimated total available funds for the 2020-21 biennium.

Texas A&M Engineering Experiment Station
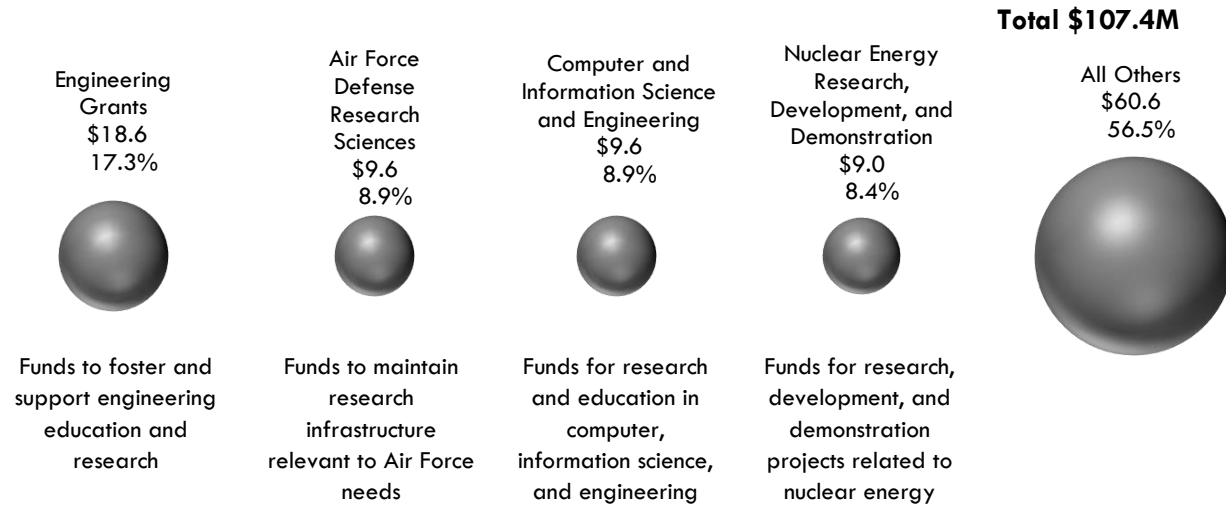**Summary of Funding Changes and Recommendations - Senate**

Funding Changes and Recommendations for the 2020-21 Biennium compared to the 2018-19 Base Spending Level (in millions)	General Revenue	GR-Dedicated	Federal Funds	Other Funds	All Funds	Strategy in Appendix A
OTHER Funding Changes and Recommendations (these issues are not addressed in Section 3 but details are provided in Appendix A):						
A) Increase in Federal Funds due to growth in Federal Grants and Awards	$0.0	$0.0	$17.5	$0.0	$17.5	A.1.1, A.3.1, B.1.1, B.1.2.
B) Decrease in Other Funds due to changes in proposals guidelines for foreign contracts	$0.0	$0.0	$0.0	($19.1)	($19.1)	A.1.1, C.1.2.
C) Decrease in General Revenue Funds for Infrastructure Support Formula Funding to align with GAI Infrastructure Formula rate and incorporate updated space data	($0.5)	$0.0	$0.0	$0.0	($0.5)	C.1.2.
TOTAL SIGNIFICANT & OTHER Funding Changes and Recommendations (in millions)	**($0.5)**	**$0.0**	**$17.5**	**($19.1)**	**($2.1)**	As Listed
SIGNIFICANT & OTHER Funding Increases	$0.0	$0.0	$17.5	$0.0	$17.5	As Listed
SIGNIFICANT & OTHER Funding Decreases	($0.5)	$0.0	$0.0	($19.1)	($19.6)	As Listed

NOTE: Totals may not sum due to rounding.

Texas A&M Engineering Experiment Station
Selected Fiscal and Policy Issues - Senate

1. **Infrastructure Support.** Funding to Texas A&M System agencies for infrastructure support within Brazos County is calculated using the General Academic Institutions' infrastructure formula rate, but is adjusted for 2020-21 for each respective agency based on updated space data.
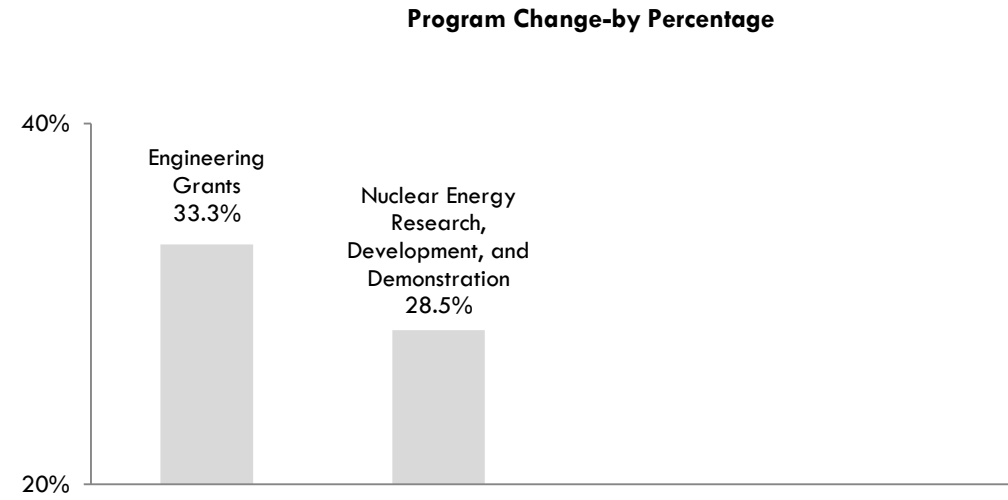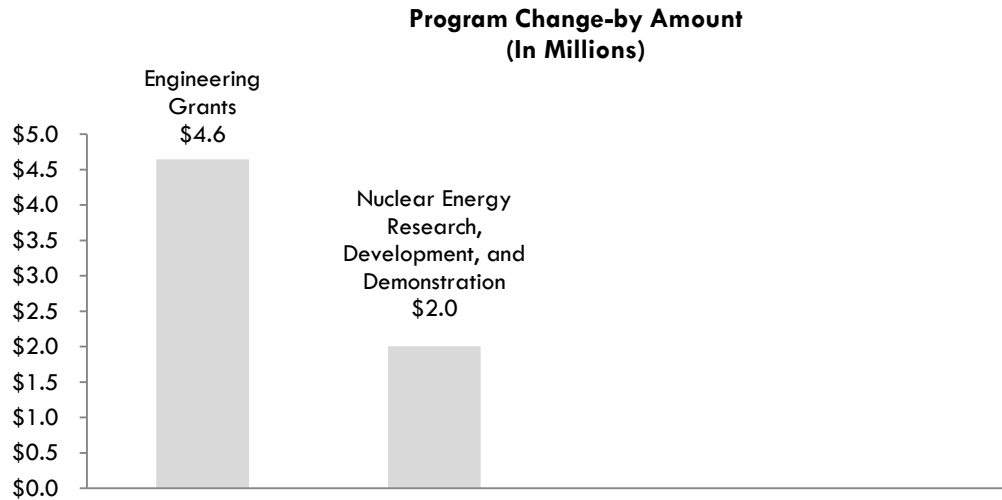
Texas A&M Engineering Experiment Station

Summary of Federal Funds (2020 - 21) - Senate

Total $107.4M

Engineering Grants $18.6 17.3%

Air Force Defense Research Sciences $9.6 8.9%

Computer and Information Science and Engineering $9.6 8.9%

Nuclear Energy Research, Development, and Demonstration $9.0 8.4%

All Others $60.6 56.5%

Funds to foster and support engineering education and research

Funds to maintain research infrastructure relevant to Air Force needs

Funds for research and education in computer, information science, and engineering

Funds for research, development, and demonstration projects related to nuclear energy

Selected Federal Fiscal and Policy Issues
Federal Funds estimates for Engineering Grants and Nuclear Energy Research, Development, and Demonstration Grants have increased in the 2020-21 biennium as a result of higher federal awards to the state.

Programs with Federal Funding Changes from 2018 - 19

Program Change-by Amount (In Millions)

Engineering Grants $4.6

Nuclear Energy Research, Development, and Demonstration $2.0

$5.0
$4.5
$4.0
$3.5
$3.0
$2.5
$2.0
$1.5
$1.0
$0.5
$0.0

Program Change-by Percentage

Engineering Grants 33.3%

Nuclear Energy Research, Development, and Demonstration 28.5%

40%

20%

		2020-21 Biennial Total			Information Technology Involved?	Contracting Involved?	Estimated Continued Cost 2022-23
		GR & GR-D	All Funds	FTEs			
Agency Exceptional Items Not Included (in agency priority order)							
1)	Critical Infrastructure Resilience and Recovery Training, Workforce Development in Emerging Technologies $9.0 million in General Revenue Funds (including 12.0 FTEs) that would establish partnerships with state and local agencies, as well as private industry, to identify best practices for strategies and metrics that the TEES states would strengthen resiliency of infrastructure networks by developing impact-prediction tools, quantifying realistic options, and modernizing adaptive methods. Agency states that this is an extension to the work performed by the Governor's Commission to Rebuild Texas.	$9,000,000	$9,000,000	12.0	No	No	$8,000,000
2)	Cybersecurity Training, Workforce Development in Emerging Technologies $5.0 million in General Revenue Funds that would establish a curriculum for strengthening cybersecurity protection of sensitive information systems or proprietary datasets stored by governmental entities, state or federal branches of the armed services, and industry.	$5,000,000	$5,000,000	10.0	Yes	No	$4,000,000
	TOTAL Items Not Included in Recommendations	**$14,000,000**	**$14,000,000**	**22.0**			**$12,000,000**

Texas A&M Engineering Experiment Station
Appendices - Senate

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C	FTE Highlights	*
D	Performance Measure Highlights	10
E	Summary of Ten Percent Biennial Base Reduction Options	11

* Appendix is not included - no significant information to report

Texas A&M Engineering Experiment Station
Funding Changes and Recommendations - Senate, by Strategy -- ALL FUNDS

Strategy/Goal	2018-19 Base	2020-21 Recommended	Biennial Change	% Change	Comments
RESEARCH PROGRAMS A.1.1	$198,330,308	$199,355,736	$1,025,428	0.5%	Recommendations include: 1) $17.3 million increase in Federal Funds due to current trends in grants and awards; 2) $7.3 million decrease in Other Funds due to changes in proposals guidelines for Foreign Grants; and 3) $9.0 million decrease in General Revenue Funds partially due to a shift in funding between strategies. The FY 18-19 base amount includes General Revenue funds from Strategy C.1.2, Infrastructure Support, that the agency used for Research Programs. The agency expended Other Funds in place of General Revenue in Strategy C.1.2, Infrastructure Support during the 2018-19 biennium.
TECHNOLOGY TRANSFER A.2.1	$1,336,799	$1,379,374	$42,575	3.2%	Recommendations include $42,575 increase in All Funds due to changes in salaries and benefits associated with merit program.
WORKFORCE DEVELOPMENT A.3.1	$9,309,256	$9,524,504	$215,248	2.3%	Recommendations include $14.2 million increase in All Funds due to estimated program and merit growth.
Total, Goal A, ENGINEERING RESEARCH	**$208,976,363**	**$210,259,614**	**$1,283,251**	**0.6%**	
STAFF GROUP INSURANCE B.1.1	$5,767,086	$5,882,428	$115,342	2.0%	Recommendations include $115,342 increase in All Funds due to increase in benefits associated with growth in FTE's and salaries.
WORKERS' COMP INSURANCE B.1.2	$102,520	$104,570	$2,050	2.0%	Recommendations include $2,050 increase in All Funds due to increase in benefits associated with growth in FTE's and salaries.
UNEMPLOYMENT INSURANCE B.1.3	$52,255	$53,300	$1,045	2.0%	Recommendations include $1,045 increase in Other Funds due to employment growth and a shift in funding between strategies.
OASI B.1.4	$2,089,399	$2,109,070	$19,671	0.9%	Recommendations include $19,671 increase in Other Funds due to employment growth and a shift in funding between strategies.
OPTIONAL RETIREMENT PROGRAM B.1.5	$62,118	$65,262	$3,144	5.1%	Recommendations include $3,144 increase in Other Funds due to a shift in funding between strategies.
Total, Goal B, STAFF BENEFITS	**$8,073,378**	**$8,214,630**	**$141,252**	**1.7%**	

Texas A&M Engineering Experiment Station
Funding Changes and Recommendations - Senate, by Strategy -- ALL FUNDS

Strategy/Goal	2018-19 Base	2020-21 Recommended	Biennial Change	% Change	Comments
INDIRECT ADMINISTRATION C.1.1	$7,929,862	$8,087,322	$157,460	2.0%	Recommendations include $157,460 increase in Other Funds due to growth in salaries and other personnel costs due to merit programs.
INFRASTRUCTURE SUPPORT C.1.2	$14,586,849	$10,892,405	($3,694,444)	(25.3%)	Infrastructure Support formula funding General Revenue amount for FY 2020-21 is based on GAI infrastructure formula rate and incorporates updated data.
CENTER FOR INFRASTRUCTURE RENEWAL C.1.3	$9,598,097	$9,603,813	$5,716	0.1%	Recommendations include $5,716 increase in General Revenue Funds for debt service for the Center for Infrastructure Renewal (joint facility for TEES and Texas A&M Transportation Institute).
Total, Goal C, INDIRECT ADMINISTRATION	**$32,114,808**	**$28,583,540**	**($3,531,268)**	**(11.0%)**	
Grand Total, All Strategies	**$249,164,549**	**$247,057,784**	**($2,106,765)**	**(0.8%)**	

Texas A&M Engineering Experiment Station
Summary of Federal Funds - Senate
(Dollar amounts in Millions)

Program	Est 2018	Bud 2019	Rec 2020	Rec 2021	2018-19 Base	2020-21 Rec	2020-21 Rec % Total	Recommended Over/(Under) Base	% Change from Base
Engineering Grants	$7.0	$7.0	$9.3	$9.3	$13.9	$18.6	17.3%	$4.6	33.3%
Air Force Defense Research Sciences	$4.3	$4.3	$4.8	$4.8	$8.6	$9.6	8.9%	$1.0	11.7%
Computer and Information Science and Engineering	$4.4	$4.4	$4.8	$4.8	$8.8	$9.6	8.9%	$0.8	9.4%
Nuclear Energy Research, Development, and Demonstration	$3.5	$3.5	$4.5	$4.5	$7.0	$9.0	8.4%	$2.0	28.5%
Education and Human Resources	$2.7	$2.7	$2.7	$2.7	$5.4	$5.4	5.1%	$0.1	1.5%
Advanced Research Projects Agency - Energy	$1.9	$1.9	$1.9	$1.9	$3.8	$3.8	3.5%	$0.0	0.0%
Basic and Applied Scientific Research	$1.1	$1.1	$1.7	$1.7	$2.3	$3.5	3.3%	$1.2	52.5%
Technology Transfer	$1.1	$1.1	$1.5	$1.5	$2.2	$3.0	2.8%	$0.8	33.5%
Mathematical and Physical Sciences	$1.3	$1.3	$1.5	$1.5	$2.6	$3.0	2.8%	$0.4	15.7%
Safety & Environmental Enforcement Research & Data Collection Offshore Energy & Mineral Activities	$1.2	$1.2	$1.4	$1.4	$2.4	$2.8	2.6%	$0.4	16.7%
Office of Science Financial Assistance Program	$1.0	$1.0	$1.4	$1.4	$1.9	$2.7	2.6%	$0.8	41.1%
Research and Technology Development	$0.8	$0.8	$1.3	$1.3	$1.6	$2.6	2.5%	$1.0	60.9%
Basic Scientific Research	$0.9	$0.9	$1.1	$1.1	$1.9	$2.3	2.1%	$0.4	21.3%
DoD Maintenance	$0.7	$0.7	$1.1	$1.1	$1.4	$2.2	2.1%	$0.8	57.1%
All Other Grants[1]	$13.1	$13.0	$14.6	$14.6	$26.1	$29.3	27.2%	$9.6	32.4%
TOTAL:	**$45.0**	**$45.0**	**$53.7**	**$53.7**	**$90.0**	**$107.4**	**100.0%**	**$17.5**	**19.4%**

[1] All Other Grants include various project and demonstration grants. The net increase of $17.5 million over the 2018-19 biennium is attributable to higher award amounts to the state for these programs.

	Expended 2017	Estimated 2018	Budgeted 2019	Recommended 2020	Recommended 2021
Performance Measure Changes					
• Dollar Volume of <u>Sponsored</u> Research <u>Awards</u> (Millions)	122.1	125.8	125.8	125.8	125.8
Measure Explanation: This measure provides the volume of total sponsored research awards in the divisions of Texas A&M Engineering Experiment Station (TEES).					
• Number of <u>Sponsored</u> Research Projects	1,231	1,255	1,255	1,255	1,255
Measure Explanation: The total active number of <u>unique sponsored</u> research projects performed by TEES and its principal investigators.					
• <u>New Measure: Number of Industry Sponsored Research Projects</u>	208	210	210	210	210
Measure Explanation: This measure is the number of unique industry-sponsored research projects active during the reporting period.					

Priority	Item	Description/Impact	Biennial Reduction Amounts			Potential Revenue Loss	Reduction as % of Program GR/GR-D Total	Program GR/GR-D Total	Included in Introduced Bill?
			GR & GR-D	All Funds	FTEs				
1)	Across the Board Reductions - Research Programs 2.5%	The General Revenue reduction would reportedly decrease TEES's ability to leverage General Revenue funds, resulting in a reduction to the scope of TEES's sponsored research activities. This would reportedly create an estimated loss of $2,471,906 in sponsored research revenues.	$249,511	$249,511	0.0	$2,471,906	2.3%	$10,865,457	No
	Across the Board Reductions - Technology Transfer 2.5%	The General Revenue reduction would reportedly reduce TEES's ability to attract technology transfer funds to the State of Texas. This would reportedly create an estimated loss of $15,950 in technology licensing related revenues.	$27,000	$27,000	0.0	$15,950	3.6%	$741,384	No
	Across the Board Reductions - Workforce Development 2.5%	The General Revenue reduction would reportedly result in a negative impact to TEES's financial resources and would require TEES to find alternate funding for this program. This would reportedly create an estimated loss of $120,521 in workforce development revenues from individuals and sponsors.	$125,000	$125,000	0.0	$120,521	2.7%	$4,703,650	No
	Across the Board Reductions - Indirect Administration 2.5 %	The budget reduction would reportedly result in a negative impact on TEES's ability to provide operations support to TEES researchers and staff thus impacting compliance and security within the agency.	$153,954	$153,954	0.0	$615,817	2.3%	$6,789,506	No
	Across the Board Reductions - Texas Emissions Reduction Plan 2.5 %	The budget reduction would reportedly result in a negative impact on TEES's ability to provide research data for the State of Texas.	$22,178	$22,178	0.0	$0	2.5%	$887,123	No
2)	Across the Board Reductions - Research Programs 2.5%	Same as above.	$249,511	$249,511	0.0	$2,471,906	2.3%	$10,865,457	No
	Across the Board Reductions - Technology Transfer 2.5%	Same as above.	$27,000	$27,000	0.0	$15,950	3.6%	$741,384	No
	Across the Board Reductions - Workforce Development 2.5%	Same as above.	$125,000	$125,000	0.0	$120,521	2.7%	$4,703,650	No
	Across the Board Reductions - Indirect Administration 2.5 %	Same as above.	$153,954	$153,954	0.0	$615,817	2.3%	$6,789,506	No

Priority	Item	Description/Impact	Biennial Reduction Amounts			Potential Revenue Loss	Reduction as % of Program GR/GR-D Total	Program GR/GR-D Total	Included in Introduced Bill?
			GR & GR-D	All Funds	FTEs				
	Across the Board Reductions - Texas Emissions Reduction Plan 2.5 %	Same as above.	$22,178	$22,178	0.0	$0	2.5%	$887,123	No
3)	Across the Board Reductions - Research Programs 2.5%	Same as above.	$249,511	$249,511	0.0	$2,471,906	2.3%	$10,865,457	No
	Across the Board Reductions - Technology Transfer 2.5%	Same as above.	$27,000	$27,000	0.0	$15,950	3.6%	$741,384	No
	Across the Board Reductions - Workforce Development 2.5%	Same as above.	$125,000	$125,000	0.0	$120,521	2.7%	$4,703,650	No
	Across the Board Reductions - Indirect Administration 2.5 %	Same as above.	$153,954	$153,954	0.0	$615,817	2.3%	$6,789,506	No
	Across the Board Reductions - Texas Emissions Reduction Plan 2.5 %	Same as above.	$22,178	$22,178	0.0	$0	2.5%	$887,123	No
4)	Across the Board Reductions - Research Programs 2.5%	Same as above.	$249,511	$249,511	0.0	$2,471,906	2.3%	$10,865,457	No
	Across the Board Reductions - Technology Transfer 2.5%	Same as above.	$27,000	$27,000	0.0	$15,950	3.6%	$741,384	No
	Across the Board Reductions - Workforce Development 2.5%	Same as above.	$125,000	$125,000	0.0	$120,521	2.7%	$4,703,650	No
	Across the Board Reductions - Indirect Administration 2.5 %	Same as above.	$153,954	$153,954	0.0	$615,817	2.3%	$6,789,506	No
	Across the Board Reductions - Texas Emissions Reduction Plan 2.5 %	Same as above.	$22,178	$22,178	0.0	$0	2.5%	$887,123	No
TOTAL, 10% Reduction Options			**$2,310,572**	**$2,310,572**	**0.0**	**$12,896,776**			