



Susan Montee, CPA  
Missouri State Auditor

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February 2007

## TAX CREDIT

# Analysis of the Agricultural Products Utilization Contributor Tax Credit Program



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## **State Estimated to Lose \$13.5 million on Agricultural Products Utilization Contributor Tax Credit Program**

This audit reviewed the cost-benefit to the state of the Agricultural Products Utilization Contributor (APU) tax credit program and found the credit would not create enough economic activity to offset the tax credits used. The Missouri Agricultural and Small Business Development Authority (MASBDA) manages this tax credit program. Its purpose is to induce contributions to MASBDA for funding agricultural product grants as described in state law for rural agricultural business concepts. Contributors receive up to a 100 percent tax credit for contributions. As of June 30, 2006, state officials had issued \$12.1 million in tax credits for this program, and \$8.6 million had been redeemed. State law requires state auditors to perform a cost-benefit analysis of all state tax credit programs, and this report is a part of such ongoing work.

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### **Loss of \$13.5 million from the APU program**

The software used to model the program estimates the economic activity resulting from the grant funding will result in about a \$168,000 net revenue gain. However, when total projected tax credit redemptions of \$13.6 million are considered, the gain becomes a projected total loss to the state of \$13.5 million. The model evaluated the impact of the grants resulting solely from the tax credit and not the total investment for any business which may have been started because other state, federal, local and private funding sources are available for the remaining investment portion of the projects. We were unable to measure the social benefits this tax credit may have on the rural communities that received the majority of the tax credit's benefits. (See page 9)

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### **Limited permanent jobs created**

The analysis predicts the tax credit program will have limited impact on jobs and the gross state product. For example, the program's resulting employment growth peaks at 20.5 net new jobs created in 2011. However, only 5 of those jobs remain by 2020, the end of the modeled period. Rural areas benefit from most of the predicted new jobs. (See page 9)

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### **APU credit is more generous than other similar credits**

State law allows up to a 100 percent tax credit for funding donated to the APU grant program. Most contributors request a 100 percent tax credit, limiting the number of contributors receiving less than 100 percent for donations made when MASBDA issues the credits. Five other Missouri contribution-based tax credit programs eligible to businesses, individuals or corporations limit the tax credit to 55 percent or less of the contribution. (See page 12)

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### **Cost-benefit analysis inaccurate**

MASBDA's cost-benefit analysis for the tax credit overstated the credit's indirect economic benefit by \$4.6 million for fiscal years 2004 and 2005 based on the methodology used by MASBDA. (See page 12)

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# Contents

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<b>State Auditor's Letter</b>		3
<b>Chapter 1</b>		4
<b>Introduction</b>	Tax Credits Used and Value-Added Grants	5
	Scope and Methodology	6
<b>Chapter 2</b>		9
<b>APU Tax Credit Will Not Create Sufficient Economic Activity</b>	Loss of \$13.5 Million From the APU Program	9
	Results of MASBDA Grant Survey	10
	Conclusions	11
	Recommendation	11
	Agency Comments	11
<b>Chapter 3</b>		12
<b>Law Change and Improved Reporting Could Benefit Program</b>	APU Credit is More Generous Than Other Similar Credits	12
	Cost-benefit Analysis Inaccurate	12
	Conclusions	13
	Recommendations	13
	Agency Comments	13
<b>Appendix I</b>	APU Tax Credit and Value-Added Grant Activity	15
<b>Appendix II</b>	Tax Credit Review Status	16
<b>Appendix III</b>	Tax Credit Redemptions	18
<b>Appendix IV</b>	MASBDA Chapter 2 Comments with REMI and SAO Comments	20
<b>Figures and Tables</b>	Figure 2.1: Predicted Change in Employment by Year	9
	Figure 2.2: Predicted Change in GSP	10
	Table 1.1: Status of Potential Value-Added Business by Grant Funding	6
	Table 3.1: Tax Credit Benefit for Credits Similar to APU	12
	Table 3.2: Indirect Benefit Computation	13
	Table I.1: APU Tax Credit and Value-Added Grant Activity by Fiscal Year	15
	Table II.1: Tax Credit Programs and Review Status	16
	Table III.1: Tax Credit Redemptions by Program	18

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## **Abbreviations**

APU	Agricultural Products Utilization Contributor
GSP	Gross State Product
MASBDA	Missouri Agricultural and Small Business Development Authority
NAICS	North American Industrial Classification System
REMI	Regional Economic Models, Inc.
RSMo	Missouri Revised Statutes
SAO	State Auditor's Office



**SUSAN MONTEE, CPA**  
**Missouri State Auditor**

Honorable Matt Blunt, Governor  
and  
Joint Committee on Tax Policy  
and  
Tony Stafford, Executive Director  
Missouri Agricultural and Small Business Development Authority  
and  
Fred Ferrell, Director  
Department of Agriculture  
Jefferson City, MO 65102

State law mandates the State Auditor's office perform cost-benefit analyses on state tax credit programs. The audit objectives included (1) estimating the economic impact of the Agricultural Products Utilization Contributor (APU) tax credit program on state revenue, and (2) reviewing the adequacy of internal controls in place to ensure compliance with statutory requirements for the tax credit program.

We concluded the APU tax credit program will not generate sufficient economic activity to offset the state tax credits used because the program is estimated to result in a net loss of approximately \$13.5 million in state revenues. Since this tax credit is designed to create additional markets for agricultural products and most agricultural production is in rural parts of the state, it can have social impacts, as well as economic impacts. For example, it may increase the quality of life in rural communities which would not occur without the tax credit. We were unable to measure these social benefits. We also found program cost-benefit reporting needs improvement and the General Assembly needs to evaluate the tax credit benefit percentage granted in relation to the contribution.

We conducted our work in accordance with applicable standards contained in *Government Auditing Standards*, issued by the Comptroller General of the United States with the exception of the external impairment of access to redemption data from income tax returns which limited our ability to conduct our work, and included such procedures as we considered necessary in the circumstances. This report was prepared under the direction of John Blattel. Key contributors to this report were Jon Halwes, Andrea Paul, and Jennifer Nunez.

A handwritten signature in cursive script that reads "Susan Montee".

Susan Montee, CPA  
State Auditor

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# Introduction

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The Agricultural Products Utilization Contributor (APU) tax credit program started in 1999 and is established under Section 348.430, RSMo. The tax credit is currently set to expire December 31, 2010. The Missouri Agricultural and Small Business Development Authority (MASBDA)<sup>1</sup> manages this tax credit program. Its purpose is to induce contributions to MASBDA for funding grants as described in Section 348.407, RSMo, for rural agricultural business concepts. Contributors receive up to a 100 percent tax credit for contributions. MASBDA is to award credits based on the least amount of credits necessary to provide incentive for the contributions.

Tax credits can generally be broken into three categories. Some are established to create a certain economic benefit, some are established to induce certain social benefits and others are created for both an economic and social benefit. The APU tax credit program is designed to create both an economic and social benefit with more emphasis on an economic impact. In addition to the economic impact, new agricultural businesses will help rural areas which have a more difficult time attracting new business development.

MASBDA is authorized to issue up to \$6 million each fiscal year in aggregate for the APU and New Generation Cooperative Incentive tax credit programs. Beginning in May of each fiscal year after the new generation authorized credits have been determined, MASBDA may offer the remaining authorized tax credits.<sup>2</sup>

Potential contributors complete an application. Some contributors are found by MASBDA and others are recruited by grant applicants who are required to secure contributions covering 50 percent of the requested amount. After applications are received by MASBDA, the commission reviews and approves the tax credits. Potential contributions obtained by grant applicants are only reviewed for tax credit approval once the grant has been evaluated. If the full amount of the grant is not funded (or not funded at all), the potential contributors are notified and asked if they still want to make the contribution. Once grant applications are received they are evaluated for completeness and reviewed by MASBDA staff before being sent to the commission. Grant applications are considered for value-added agricultural

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<sup>1</sup> MASBDA is administered by a seven-member commission which is appointed by the Governor and confirmed by the Senate. The Director of the Department of Agriculture serves as an ex-officio commission member. An Executive Director manages MASBDA operations. MASBDA is part of the Department of Agriculture.

<sup>2</sup> If less than \$6 million in new generation tax credits were utilized and assets available under the APU tax credit program do not exceed \$12 million.

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business concepts that lead to and result in development, processing and marketing of new or expanded uses or technologies for agricultural products. The concepts are also to foster agricultural economic development in Missouri's rural communities. Applications are considered for expenses related to the creation, development and operation of a value-added agricultural business including feasibility and marketing studies, legal assistance, marketing and business plans, prospectus development for cooperatives, and operational consulting. Applicants pay a \$150 grant application fee for requests of \$25,000 or less and \$300 for requests over \$25,000.

The commission evaluates the written grant application using a scoring sheet that lists criteria and a point system. All applicants scoring at least 60 out of 100 points are asked to make an oral presentation to the commission. The commission evaluates the oral presentations using an identical form as the written evaluation. The two scores are then added together for a total score. When allocating grant funds, the commission first issues grants to applicants asking for less than \$25,000 since state law requires at least 10 percent of the funds be given to such applicants. The remaining funds are first issued to the best scoring applicants and down the list until funds are exhausted or there are no more qualifying applicants. Ten percent of the grant award is retained by MASBDA for authority administration costs. No single agricultural business concept is to receive more than \$200,000 in grant awards.

The tax credits are transferable or may be sold under provisions of Section 348.430.4, RSMo, and the credits can be carried back 3 years to offset taxes already paid or forward for 5 years to offset future tax liability. The tax credits may be redeemed against state income tax, corporate franchise tax, and financial institution tax.

Section 620.1300, RSMo, requires the State Auditor's office to analyze the cost-benefit impact to evaluate the effectiveness of all state tax credit programs.

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## Tax Credits Used and Value-Added Grants

As of June 30, 2006, records show \$12.1 million in tax credits had been issued and \$8.6 million in tax credits had been redeemed leaving \$3.5 million in outstanding tax credits. MASBDA officials do not expect any APU tax credits to be issued in fiscal years 2007 and 2008 and could not estimate subsequent years. We estimated an additional \$1.5 million in credits would be issued through the end of 2010 the statutory program end. Tax credits can be redeemed through 2015.

Through mid-February 2006, APU contributions<sup>3</sup> had been used to fund \$9.5 million in value-added grants with actual expenditures of approximately \$8 million since the inception of the program. Project costs totaled \$19.5 million for the projects funded by the grants. Other sources funded \$10 million of these projects.

As of June 2006, MASBDA had classified the status of potential value-added businesses related to these grants as shown in Table 1.1.

**Table 1.1: Status of Potential Value-Added Business by Grant Funding**

Category	Grant Amount	Percentage
Operational	\$5,027,826	53.1
Construction	430,249	4.6
Equity Capitalization	797,280	8.4
Planning Phase	1,726,723	18.2
Non-operational	1,483,220	15.7
	\$9,465,297	100.0

Source: MASBDA data and SAO analysis.

Operational does not necessarily mean the business is still in operation, but at some point it was in that phase. Seventy-five of 147 (51 percent) awarded grants since program inception have resulted in operational business ventures while 32 of 147 (22 percent) grants resulted in non-operational businesses based on MASBDA's classification.

## Scope and Methodology

To evaluate the impact of the APU tax credit program on the state, we reviewed state statutes and MASBDA's procedures. We discussed the operation of the program and internal controls with MASBDA's staff to determine if proper controls were in place to ensure compliance with statutory requirements.

We obtained database files from MASBDA which reported the amount of tax credits issued to APU contributors and detail on each APU grant award and corresponding expenditures. We determined this database information was complete and could be relied upon for purposes of our analysis.

We reviewed data MASBDA officials compiled in 2003 and updated in 2006 on a sample of businesses created as the result of assistance through the APU grant program.

<sup>3</sup> Includes some state appropriations as described in Appendix I.



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We obtained aggregate totals of annual tax credit redemptions from the Department of Revenue. We were not provided detailed redemption information. The Director of the Department of Revenue denied us access due to the department's interpretation of the Missouri Supreme Court decision in the case of Director of Revenue v. State Auditor 511 S.W.2d 779 (Mo. 1974). These external impairments limited our ability to conduct work and therefore, we could not verify the completeness and accuracy of annual redemption totals.

We used statewide macroeconomic modeling software called Policy Insight® 7.0, produced by Regional Economic Models, Inc. (REMI), to analyze the total economic impact of the tax credit program on the state. REMI specifically designed this model for Missouri which aggregates the production sectors into 70 sectors by North American Industrial Classification System (NAICS) code. The REMI model generates a baseline forecast for the state without the tax credit in place. We then input data into the model to reflect how the tax credit affects spending by firms, households, and government and studied the difference between variables of interest in the baseline and the alternative forecast. The key outputs from the model are (1) growth in total employment compared to the baseline, (2) growth in gross state product compared to the baseline, (3) and the fiscal impact on the General Revenue Fund. We modeled the tax credit through 2020.

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## Modeling assumptions

We changed two variables in the REMI model to create the alternative forecast (1) production costs of the industry sectors receiving grants as a result of the APU tax credit, and (2) government spending.

We entered actual and estimated grant expenditures as reduced production costs for that particular industry (NAICS code) in the REMI model. Production costs include labor, capital, and fuel. We used the year and NAICS code reported by MASBDA for each grant. Because this tax credit is active until at least the end of 2010, we projected future grant disbursements by year and NAICS code for calendar years 2006 to 2010 by taking an average of the grant disbursements annually through 2005. We used these estimates to calculate total modeled investment for the projected years and entered that amount into the REMI model as reduced production costs. Altogether, we reduced production costs by \$13.6 million. The model is evaluating the impact of the grants resulting from the tax credit and not the total investment for any business which may have been started because other state, federal, local and private funding sources are available for remaining investment portion of the projects.

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Since contributors received nearly a 100 percent tax credit for donations to the APU grant fund, we made no adjustment to reduce household spending since contributors' financial position was unaffected.

Since tax credits issued nearly equaled the contributions to fund the value-added grant program, we reduced state spending by actual and estimated grant disbursements because the funding had been restricted for other government purposes.

To assess the fiscal impact of the APU tax credit and value-added grant program, we captured any increases to the General Revenue Fund as a result of the tax credit. Increases to state general revenue would result from additional sales and income tax revenues or reduced expenses (for example, in assistance programs) offset by increased costs (for example, business compliance monitoring). We then subtracted tax credit actual and estimated redemptions for each year from 2000-2015 from General Revenue Fund revenues.

We submitted our modeling assumptions and the REMI model results to an economist at REMI. He stated he found no problems with the assumptions and results.

In addition to the various factors discussed above which are measurable through the use of REMI, there are other factors which may have an impact that are not measurable. Since this tax credit is designed to create additional markets for agricultural products and most agricultural production is in rural parts of the state, it can have social impacts, as well as economic impacts. For example, it may increase the quality of life in rural communities which would not occur without the tax credit. Such a benefit would not be measurable in the REMI model. The grant recipients may also receive other federal and state government grants or subsidies. Those benefits to the producers are not included in the REMI model inputs because we wanted to measure only the impact of the APU tax credits.

We requested comments on a draft of our report from the MASBDA commission. We conducted our work between January 2006 and August 2006.

# APU Tax Credit Will Not Create Sufficient Economic Activity

The APU tax credit program as projected will not generate sufficient economic activity because the program minimally impacts gross state product (GSP) and does not create a significant number of jobs. As a result, the state is estimated to lose revenue of \$13.5 million over the 20-year period modeled.

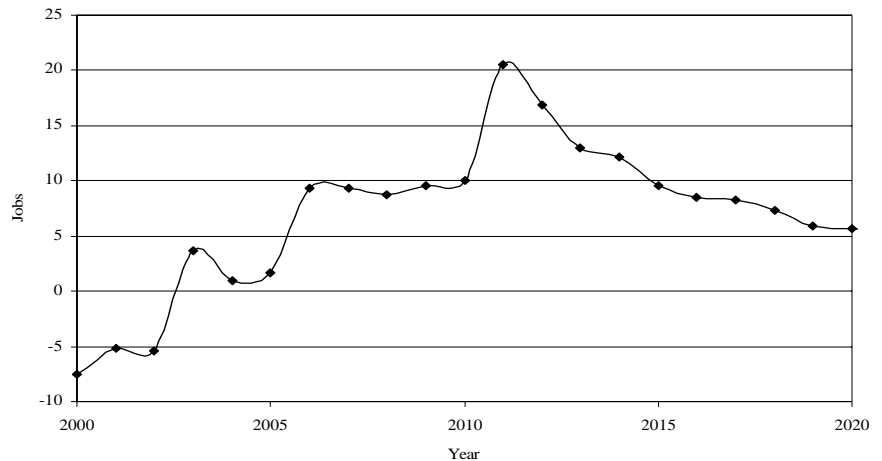
## Loss of \$13.5 Million From the APU Program

The REMI model predicts the APU tax credit program will generate a \$13.5 million loss. The model estimates the economic activity resulting from the grant funding will result in about a \$168,000<sup>4</sup> net revenue gain. However, when total projected tax credit redemptions of \$13.6 million are considered, the gain becomes a projected total loss to the state of \$13.5 million.<sup>5</sup> The APU program is not projected to have a positive effect on state revenues in any years.

## Impact on jobs and GSP not enough to offset tax credits

The REMI model predicts the tax credit program will have limited impact on jobs and the GSP. For example, the program's resulting employment growth peaks at 20.5 net new jobs created in 2011. However, only 5 of those jobs remain by 2020, the end of the modeled period. Rural areas benefit from most of the predicted new jobs. Figure 2.1 shows the predicted change in employment by year.

**Figure 2.1: Predicted Change in Employment by Year**



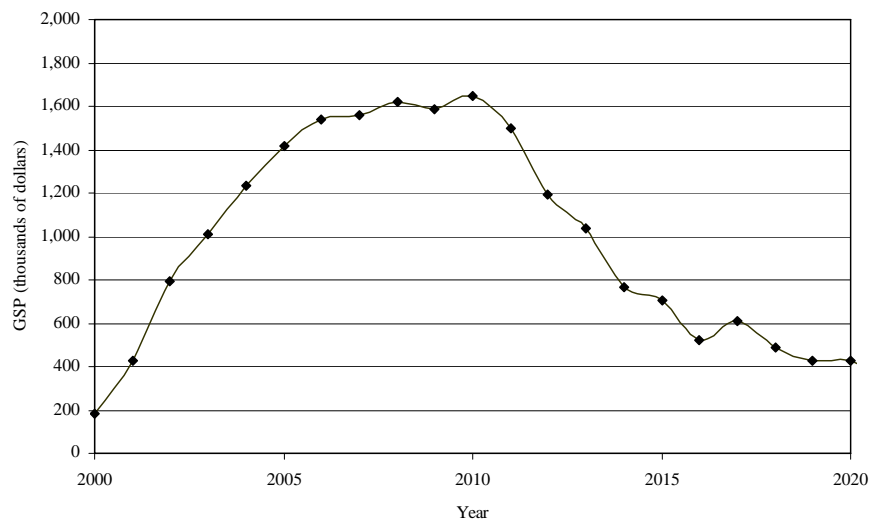
Source: REMI economic model.

<sup>4</sup> This net gain is calculated by taking the projected \$560,000 revenues generated from the program less the projected \$392,000 in state expenditures.

<sup>5</sup> This loss calculation does not include the positive social effects of any business projects which occurred in the rural communities that would not have occurred without the tax credit. For example, it was not possible to measure the economic benefits of the increased quality of life this tax credit may have provided to these areas.

The REMI model predicted GSP increased and peaked at an increase of \$1.64 million in 2010, and steadily declines, but remains positive in subsequent years as the effects of the program dissipate. The projected cumulative increase in GSP totals \$20.7 million through 2020. The change in GSP per capita is negligible with the tax credit program. The largest difference is in 2007 with an increase in GSP per capita of 13 cents. Cumulative GSP per capita is also negligible through 2020. Figure 2.2 shows the predicted change in GSP.

**Figure 2.2: Predicted Change in GSP (dollars in thousands)**



Source: REMI economic model.

## Results of MASBDA Grant Survey

At the request of the General Assembly in 2003, MASBDA staff surveyed a sample of 15 entities or individuals receiving APU grants to obtain information on sales and jobs created. At our request, MASBDA staff updated this information in 2006.

The 2003 results showed the 15 businesses developed by these grant recipients had payrolls of \$4 million and sales of \$90.4 million with 928 farmers involved in these projects. Data in 2006 could only be obtained from 9 of the 15 businesses.<sup>6</sup> Payroll expenditures for these 9 businesses increased 4 percent with 5 businesses showing payroll increases. Sales grew 45 percent with 6 businesses showing sales increases. One business accounted for 91 percent of total sales.

<sup>6</sup> Two businesses had been sold and four did not respond to the information request.

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Four of the 15 projects involved 77 percent (719 of 928) of participating farmers. By 2006, two of these projects had shown significant sales growth, one had shown a significant sales decline and one did not respond to the 2006 survey. The projects showing sales growth produced ethanol and food grade grain.

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## Conclusions

Although the APU tax credit program is estimated to create jobs and increase GSP, the REMI model estimates it will generate limited overall economic activity. The model results show the APU program creates only 5 jobs which remain in place by the end of the 20 year period the program was modeled and will cost the state \$13.5 million over that period. The investment activity and job creation through 2005 occurred primarily in rural communities.

The APU program sunsets December 31, 2010. Because of the minimal economic benefits resulting from program costs, the General Assembly should evaluate whether the program's social benefits outweigh those costs when considering the program's extension.

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## Recommendation

We recommend the General Assembly evaluate whether the APU program's social benefits outweigh its costs when considering its extension.

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## Agency Comments

See Appendix IV for MASBDA's Chapter 2 comments with REMI and SAO comments.

# Law Change and Improved Reporting Could Benefit Program

APU grant program contributors receive up to a 100 percent tax credit for funds donated making it one of the most generous contribution-based tax credit programs in the state. The cost-benefit of the program has been overestimated to the General Assembly in annual budget reporting. As a result, this program may be costing the state more than necessary and the legislative decisions could be based on faulty data.

## APU Credit is More Generous Than Other Similar Credits

Section 348.430, RSMo, allows up to a 100 percent tax credit for funding donated to the APU grant program. Section 348.430.3, RSMo, says the awarding of the credits is at the approval of MASBDA based on the least amount of credits necessary to provide incentive for the contributions. MASBDA's website indicates selection is based on a competitive basis; however, most contributors request a 100 percent tax credit, limiting the number of contributors receiving less than 100 percent for donations made when MASBDA issues the credits.

Table 3.1 lists five Missouri tax credit programs eligible to businesses, individuals or corporations, based on qualified donations.

**Table 3.1: Tax Credit Benefit for Credits Similar to APU**

<b>Tax Credit</b>	<b>Percent of Credit Based on Contribution</b>	<b>Purpose of Credit</b>
Small Business Incubator	50	Develop Small Businesses
Affordable Housing Development	55	Increase Housing
Domestic Violence	50	Facilitate Business Projects
Maternity Home	50	Funding for Shelters
		Funding for Homes

Source: SAO Analysis.

Table I.1 in Appendix I shows that since program inception APU tax credits issued have equaled nearly 100 percent of donations. A MASBDA official said it was unlikely the program would receive donations unless the tax credit was 100 percent.

## Cost-benefit Analysis Inaccurate

MASBDA's cost-benefit analysis for the tax credit overstated its indirect economic benefit by \$4.6 million for the fiscal year 2004 and 2005 computations based on the methodology used.

MASBDA staff has prepared an annual tax credit analysis for the APU tax credit since fiscal year 2000, for the General Assembly as part of the state budget process. That analysis includes a cost-benefit analysis. A MASBDA official said he calculated the credit's direct benefit as the amount of grants awarded for the fiscal year and the indirect benefit represents the difference between the overall project costs and the grant awards during the fiscal year.

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Our analysis showed the direct benefit amount was correctly computed, but the indirect benefit was overstated as shown in Table 3.2.

**Table 3.2: Indirect Benefit Computation**

<b>Fiscal Year</b>	<b>Indirect Fiscal Benefit Reported</b>	<b>Total Project Amount (A)</b>	<b>Total Grants Awarded (B)</b>	<b>Expected Indirect Benefit (A-B)</b>	<b>Difference</b>
2004	\$2,665,995	\$1,904,528	\$1,403,155	\$501,373	\$2,164,622
2005	\$3,950,832	\$3,618,610	\$2,079,386	\$1,539,224	\$2,411,608
Total	\$6,616,827			\$2,040,597	\$4,576,230

Source: SAO analysis, MASBDA cost-benefit analysis.

We could not determine a reason for the difference because a MASBDA official told us no documentation had been maintained to support the cost-benefit computation made.

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## Conclusions

Contributors to the APU grant program receive a more favorable tax credit benefit than other similar state credit programs involving businesses, individuals or corporations donating funding for business creation or specific social causes. Whether the General Assembly intended this result when creating the program law is unknown.

The cost-benefit computations by MASBDA in fiscal years 2004 and 2005 overstated the tax credit program's indirect benefit based on MASBDA's calculation methodology.

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## Recommendations

We recommend the General Assembly:

3.1 Evaluate the tax credit percentage contributors receive based on donations made to the APU grant program.

We recommend MASBDA:

3.2 Prepare the annual tax credit cost-benefit analysis using a documented methodology and maintain documentation of the calculation.

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## Agency Comments

MASBDA provided the following comments:

3.2 *MASBDA's belief is that Agricultural Product Utilization Contributor Tax Credits play a vital role in rural economic development in Missouri and it is our belief that the tax credits do provide direct positive benefits at both the state and local level. MASBDA will continue to provide the most accurate realistic cost-benefit analysis to the General Assembly. MASBDA is preparing to solicit bids from*

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*outside sources to conduct more frequent cost benefit analysis in an effort to update information to the General Assembly. Documentation of the calculations for the tax credit cost benefit analysis will be maintained past the current maintenance schedule of one budget year.*



# APU Tax Credit and Value-Added Grant Activity

Table I.1 lists the APU contributions, tax credits issued and value-added grant awards through June 30, 2006.

**Table I.1: APU Tax Credit and Value-Added Grant Activity by Fiscal Year**

<b>Fiscal Year</b>	<b>Contributions</b>	<b>Tax Credits Issued</b>	<b>Value-Added Grant Awards</b>
1999	n/a	n/a	\$ 452,021 <sup>1</sup>
2000	\$1,542,780	\$ 1,530,631	499,681 <sup>1</sup>
2001	1,310,268	1,299,518	1,348,422
2002	1,117,185	1,115,185	1,145,732
2003	1,932,827	1,929,627	1,347,114
2004	2,395,544	2,385,444	1,403,155
2005	2,089,443	2,081,343	2,079,386
2006	1,781,700	1,770,000	1,189,788
<b>Total</b>	<b>\$12,169,747</b>	<b>\$12,111,748</b>	<b>\$9,465,297</b>

<sup>1</sup> Grants were funded by state appropriations in fiscal year 1999 and 2000.

Source: MASBDA annual reports.

# Tax Credit Review Status

Table II.1 shows the statewide tax credit programs and the State Auditor's office review status of each program.

**Table II.1: Tax Credit Programs and Review Status**

<b>Program</b>	<b>Administering Department</b>	<b>Report Number for Review</b>
New Generation Cooperative Incentive	Agriculture	2007-06
Agricultural Product Utilization Contributor	Agriculture	2007-05
Adoption (Special Needs)	Revenue	2005-79
Community Development Corporation/Bank	Economic Development	2005-55
(Capital) Small Business Investment	Economic Development	2005-54
Certified Capital Companies (CapCo)	Economic Development	2004-56
New Enterprise Creation	Economic Development	2004-56
Community College New Jobs Training Bonds	Economic Development	2003-32
Brownfield Jobs/Investment	Economic Development	2002-33
Brownfield Remediation	Economic Development	2002-33
Historic Preservation	Economic Development	2002-33
Qualified Research Expense	Economic Development	2002-33
Seed Capital	Economic Development	2002-33
Youth Opportunities and Violence Prevention	Economic Development	2002-33
Film Production	Economic Development	2001-13
Rebuilding Communities	Economic Development	2001-13
Small Business Incubator	Economic Development	2001-13
Winery and Grape Growers	Economic Development	2001-13
Affordable Housing Assistance	Economic Development	To Be Reviewed
Bank Franchise	Revenue	To Be Reviewed
Bank Tax Credit for S Corporation Shareholders	Revenue	To Be Reviewed
Brownfield Demolition	Economic Development	To Be Reviewed
BUILD Missouri Bonds	Economic Development	To Be Reviewed
Business Facility	Economic Development	To Be Reviewed
Cellulose Casings	Revenue	To Be Reviewed
Charcoal Producers	Natural Resources	To Be Reviewed
Development	Economic Development	To Be Reviewed
Disabled Access	Revenue	To Be Reviewed
Domestic Violence	Public Safety	To Be Reviewed
Enhanced Enterprise Zone	Economic Development	To Be Reviewed
Enterprise Zone	Economic Development	To Be Reviewed
Examination Fees	Insurance	To Be Reviewed
Family Development Account	Economic Development	To Be Reviewed
Guarantee Fee	Economic Development	To Be Reviewed
Life and Health Guarantee Association	Insurance	To Be Reviewed
Maternity Home	Social Services	To Be Reviewed
MDFB Development and Reserve	Economic Development	To Be Reviewed

**Appendix II**  
**Tax Credit Review Status**

<b>Program</b>	<b>Administering Department</b>	<b>Report Number for Review</b>
MDFB Export Finance	Economic Development	To Be Reviewed
MDFB Bond Guarantee Credit	Economic Development	To Be Reviewed
MDFB Infrastructure	Economic Development	To Be Reviewed
Missouri Health Insurance Pool	Insurance	To Be Reviewed
Missouri Low Income Housing	Economic Development	To Be Reviewed
Missouri Property and Casualty Guarantee Association	Insurance	To Be Reviewed
Neighborhood Assistance	Economic Development	To Be Reviewed
Neighborhood Preservation	Economic Development	To Be Reviewed
Pharmaceutical	Revenue	To Be Reviewed
Processed Wood Energy	Natural Resources	To Be Reviewed
Property Tax	Revenue	To Be Reviewed
Retain Jobs	Revenue	To Be Reviewed
Shared Care	Health and Senior Services	To Be Reviewed
Sponsorship and Mentoring Program	Elementary and Secondary Education	To Be Reviewed
Transportation Development	Economic Development	To Be Reviewed

Source: SAO

# Tax Credit Redemptions

Table III.1 shows the redeemed tax credits for fiscal years 2003 through 2006 for all state tax credit programs. We did not audit the information.

**Table III.1: Tax Credit Redemptions by Program**

Program	Fiscal Year			
	2003	2004	2005	2006
Adoption (Special Needs)	\$1,993,883	1,995,882	2,582,546	2,460,245
Affordable Housing Assistance	7,601,144	7,554,503	7,702,860	4,080,564
Agricultural Product Utilization Contributor	957,074	1,964,872	1,639,541	1,857,235
Bank Franchise	873,461	1,596,458	2,543,523	2,413,631
Bank Tax Credit for S Corporation Shareholders	1,060,111	1,233,830	941,460	1,451,903
Brownfield Jobs/Investment	90,893	2,134,891	1,726,687	1,476,143
Brownfield Remediation/Demolition	5,669,489	16,101,975	10,627,870	10,611,324
BUILD Missouri Bonds	4,261,882	9,667,000	3,770,557	5,402,416
Business Facility	7,244,747	7,826,417	4,546,330	5,892,727
Cellulose Casings	225,319	429,480	382,540	341,315
Certified Capital Companies	13,111,196	13,564,932	13,371,610	13,164,904
Charcoal Producers	120,837	0	384,609	70,151
Community Development Corporation/Bank	484,723	1,632,669	2,021,628	34,870
Community College New Jobs Training Bonds	8,650,799	8,061,584	6,847,304	5,771,777
Development	430,097	562,622	2,487,152	4,518,483
Disabled Access	47,506	87,401	56,761	36,549
Domestic Violence	513,532	475,283	515,035	525,348
Dry Fire Hydrant	20,371	13,169	17,228	805
Enhanced Enterprise Zone	n/a	n/a	9,809,254	5,922,720
Enterprise Zone	13,767,273	19,766,366	15,485,501	14,759,891
Examination Fees and Other Fees <sup>1</sup>	6,710,016 <sup>2</sup>	5,844,206 <sup>2</sup>	4,962,341 <sup>2</sup>	5,413,885
Family Development Account	8,760	27,488	12,875	9,237
Film Production	122,810	423,857	322,079	788,596
Guarantee Fee	0	0	11,224	73,009
Historic Preservation	43,153,986	66,089,980	74,532,355	103,134,226
Life and Health Guarantee Association <sup>1</sup>	2,440,427	177,712	302,516	4,910
Maternity Home	976,379	982,747	743,636	760,674
MDFB Bond Guarantee Credit	316,855	0	594,034	0
MDFB Development and Reserve	0	0	1,500	0
MDFB Export Finance	0	0	0	0
MDFB Infrastructure	6,310,541	10,020,578	25,953,799	21,858,725
Missouri Business Modernization and Technology (Seed Capital)	508,182	288,174	164,894	60,313
Missouri Health Insurance Pool <sup>1</sup>	1,581,522	3,687,665	3,688,639	5,497,999
Missouri Low Income Housing	29,978,473	36,916,831	65,392,601	61,963,799

**Appendix III  
Tax Credit Redemptions**

<b>Program</b>	<b>Fiscal Year</b>			
	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
Missouri Property and Casualty Guarantee Association <sup>1</sup>	18,362,815	16,823,462	16,959,512	6,019,763
Neighborhood Assistance	8,641,533	10,217,628	9,286,880	10,009,497
Neighborhood Preservation	3,879,134	4,001,293	8,461,503	4,627,368
New Enterprise Creation	4,331,972	3,259,307	2,504,561	1,534,647
New Generation Cooperative Incentive	1,510,305	3,466,068	3,334,935	4,990,666
Pharmaceutical	3,737,102	524,527	142,373	1,672
Processed Wood Energy	3,642,570	1,205,443	3,700,285	3,728,100
Property Tax	97,180,378	95,237,314	99,455,570	96,090,703
Qualified Research Expense	1,642,524	2,038,230	1,626,864	1,006,688
Rebuilding Communities	2,289,501	1,415,889	1,694,006	1,764,167
Retain Jobs	n/a	n/a	0	2,882,995
Shared Care	24,355	39,109	33,574	39,247
Small Business Incubator	81,716	167,360	246,807	322,278
Small Business Investment (Capital)	149,068	49,478	109,050	58,189
Sponsorship and Mentoring Program	0	0	0	0
Transportation Development	1,249,848	3,678,532	3,545,219	980,806
Winery and Grape Growers	275,366	260,397	179,323	69,564
Youth Opportunities and Violence Prevention	2,898,572	3,272,225	3,211,185	3,256,950
<b>Total</b>	<b>\$309,129,047</b>	<b>364,784,834</b>	<b>418,634,136</b>	<b>417,741,674</b>

<sup>1</sup> Redemptions are on a calendar year rather than fiscal year and based on tax year credit was applied against.

<sup>2</sup> Until 2006 the amount reported by the Department of Insurance for this credit was only the examination fee portion and not the other taxes and fees for which credits were also redeemed. The numbers in this appendix for 2003, 2004, and 2005 have been updated to include all redeemed credits.

Source: Office of Administration, Department of Revenue, and tax credit administering agencies.

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# MASBDA Chapter 2 Comments with REMI and SAO Comments

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MASBDA provided the following comments to the REMI analysis in Chapter 2:

*Missouri Agricultural and Small Business Development Authority (MASBDA) commissioners and staff welcomed and embraced the audit that was to be conducted by the Missouri State Auditor's office. We take very seriously our charge of administering legislatively mandated programs and always welcome any comments and suggestions on ways to better implement and administer programs. We were very supportive of the "Tax Credit Accountability Act" which provides for audits of all tax credit programs. In fact, MASBDA provided testimony in favor of the legislation.*

*During the initial audit meeting, MASBDA staff expressed grave concerns about the REMI model being used to conduct a cost/benefit analysis. The model utilizes North American Industry Classification System (NAICS) codes which are biased against agriculture as the 70 sector codes do not reflect modern value-added agriculture. That same concern was expressed throughout the audit, during the exit interview, and again when the audit findings were presented to the MASBDA commissioners.*

*We understand REMI to be an instrument for forecasting and policy analysis. The model utilizes national forecasts of future growth or decline by industry sector. The historical data is used to track how the industrial mix and concentration of employment in the region is different from the rest of the country, and how the economic growth trends in the region differ from national trends for each industry sector. The model produces a controlled forecast by using current data regarding the economy. The control forecast represents the projection of the economy into the future ceteris paribus. This means that the future economic growth will follow similar patterns in the future as had been experienced in the past. In modern value-added agriculture that assumption is certainly flawed. For example, in the case of alternative fuels with unprecedented high oil prices, fuel prices and demand being at all time highs is in no way reflective of history. Many other value-added enterprises, who have received the benefits of tax credits, have experienced tremendous advances in technology making them much more efficient and effective. History was in no way a predictor of those changes. For example, the first ethanol produced in Missouri was not until 2001 and the first biodiesel plant is just now coming online. With this short history, the model cannot have an adequate representative baseline.*

*As the audit analysis states, REMI generates a baseline forecast for the state, by sector, by geographic regions, by NAICS codes (which are not reflective of modern day value-added agriculture) without the tax credit program in place. Data was then input into the model to reflect how the tax*

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## Appendix IV MASBDA Chapter 2 Comments with REMI and SAO Comments

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*credits affect spending by firms, households, and government and then studied the difference between certain variables in the baseline and the alternative forecast.*

*The alternative forecast allows the user to input variable changes to occur in future time periods. Only those variables that would be affected by the policy change being measured would be changed in the alternative forecast. The REMI model then forecasts economic performance based upon the policy variable changes.*

*The difference between the alternative and the control forecasts, measured by the distance between the two forecast lines, represents the economic impact of the policy change upon the economy. If the alternative forecast is greater than the control forecast, then a positive economic impact results for the economy. A negative economic impact results should the alternative forecast be less than the control forecast.*

*The “Tax Credit Accountability Act” requires the Missouri State Auditor to prepare a cost/benefit analysis of all tax credit programs. Again, we believe the REMI model does NOT accomplish that purpose on each individual tax credit program but rather looks at the tax credit programs from a policy analysis standpoint without consideration being given for the merits of each specific project funded through the sale of specific tax credits.*

*REMI is intended to be used to analyze policy changes and make forecasts accordingly. REMI is not intended to be used for a cost/benefit analysis of specific tax credits. Again, REMI looks at sectors not specific projects and we believe is an inadequate tool to conduct a cost/benefit analysis. Some examples of the inadequacies of the REMI model are:*

- 1. The REMI model does not take into account opportunity cost. For example, many of those projects which are classified as non-operational might well have become operational momentarily only to fail because of no feasibility study, no marketing study, or no business planning being done. The value-added grants provide for those studies and may well have saved many poor business decisions from being made. Many of the projects that are funded go through an extended period of time completing their studies, business planning, legal organization, etc. Therefore, the full benefit of the grant may be several years out and may not be adequately modeled in REMI.*
- 2. The audit does not adequately reflect the benefit of the grants. The grants, for the most part, pay for the services of consultants,*

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**Appendix IV**  
**MASBDA Chapter 2 Comments with REMI and SAO Comments**

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*engineers, accountants, attorneys, business planners, and economists. However, inadequate NAICS codes were used based on the type of project and not who received the proceeds from the grant. It seems logical that both the professionals and those operational projects would both be modeled. It is our understanding that REMI does not have the capability to multi-model based on one funding source.*

- 3. In addition, the model does not allow multiple codes per project. For example, a meat company doing custom slaughtering, wholesale, retail, and further processing would be fit into one code without each sector of the business being reflected in the total operation.*

*A recent study conducted by the University of Missouri's Commercial Agriculture Program shows:*

- the one time impact of constructing the current four operational ethanol plants to have created 5,374 U.S. jobs,*
- increased the economic activity in the U.S. by \$637 million,*
- the operation of the same four plants will annually maintain 2,784 Missouri jobs, and*
- provide \$92 million in Missouri employment income.*

*That same study shows that the four operational plants will annually:*

- generate \$178 million in value-added income to Missouri's economy,*
- generate \$390 million in economic activity in Missouri, and*
- raise the value of Missouri's corn crop by \$41 million annually.*

*A study just completed by the Missouri Department of Economic Development's Missouri Economic Research & Information Center (MERIC) in which they looked at the biofuels (ethanol and biodiesel) industry (over a 10 year period, 2004-2013) in Missouri concludes, in part, that for every dollar invested in the biofuels industry:*

- \$0.42 in net general revenues to the state totaling (\$165 million),*
- \$17.34 in new personal income to Missourians totaling \$4.9 billion, and*
- \$19.08 in new economic activity/output to the state economy totaling \$5.4 billion.*



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**Appendix IV**  
**MASBDA Chapter 2 Comments with REMI and SAO Comments**

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*The study goes on to show that on average each year the industry creates:*

- 6,670 new jobs paying an average wage of \$24,989,
- (\$16.5 million) in net general revenues on average each year,
- \$494 million in new personal income on average each year, and
- \$544 million in new economic activity/output on average each year.

*The study does show a (\$16.5 million) in net general revenues for average per year for the modeling years 2004 - 2013. However, the study does show that beginning with 2013 there is a positive impact on general revenues of \$10,688,931. The modeling is only through the year 2013 but certainly there is every reason to believe that a positive impact on general revenue will continue so long as the facilities are in production.*

*It is important to note that the four ethanol plants referenced above did receive a Missouri Value-Added Grant from MASBDA which was instrumental in getting them started. It should also be noted that almost all of the farmer owned biofuel facilities referenced in the MERIC study also received a Missouri Value-Added Grant.*

*MASBDA is also concerned about the audit because a number of the assumptions made in the audit seem to be arbitrary and without merit.*

1. *Based on current statute the last credits could be claimed in 2015. It is unclear why the model is projecting cost through 2020, five years after the last credits could be claimed. Certainly, the benefits will continue so long as the facilities are operational.*
2. *The audit states the Agricultural Product Utilization Contributor Tax Credit Program is one of the most generous contribution-based tax credits in the state. The audit fails to point out that of those used for comparison, many also qualify as a charitable contribution and would receive favorable tax considerations, which are not available to taxpayers making contributions to MASBDA.*

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## **Appendix IV**

### **MASBDA Chapter 2 Comments with REMI and SAO Comments**

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The REMI economist who we consulted with during the audit provided the following analysis of MASBDA's comments and the specific concerns noted regarding the appropriateness of the REMI software in doing a cost-benefit analysis.

#### **REMI Comments:**

The analyses using the REMI model looks into the “total” benefit/cost of all the tax credit programs by looking beyond the method of increase in economy output from the sector of traditional input/output models. Understanding the concerns of Missouri’s Agricultural sectors, an increase in output is not sufficient enough to account for the actual total benefits of the program to the state. REMI Policy Insight was adjusted to look at the sector impact beyond their NAICS category by looking into productivity improvements and Missouri’s competitiveness in the national and international market.

Within the REMI model there are strong regional purchases and exports for the sector and their intermediate inputs, which shows the sector’s importance for the health of the Missouri economy. Although in the analyses, there were improvements to Missouri’s competitiveness, the increases in the sector’s competitiveness were minimal over time.

REMI Policy Insight was used in many analyses in the U.S. including the recent studies of Advanced Ethanol in the Great Lake region for Michigan Technological University and Biodiesel feasibility study for the U.S. Environmental Protection Agency. Although REMI looks at how markets and impacts change over time, its clients have frequently used the REMI model to derive the cost and benefits of programs and projects. REMI would like its users to look beyond benefit/cost analysis but there is no denying the importance of using benefit/cost ratios for comparisons of projects. REMI has been used for the last 26 years in helping its clients figuring out the total benefits and costs of projects. Agencies such as New Mexico Department of Finance Administration, Washington Department of Transportation, Louisiana Legislative Fiscal Office, Massachusetts Institute of Technology, New Jersey Transit Authority and countless others have used REMI for benefit/cost analysis.

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**Appendix IV**  
**MASBDA Chapter 2 Comments with REMI and SAO Comments**

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Steps were taken to adjust the sector to increase the productivity and lower the production costs and to make the industry competitive in the national and global markets.

1. The value-added grants were benefiting business productivity right at the initial years of the program. The impact will be less if the benefits will occur in future years.
2. The proceeds of the program went into lowering the business costs and increasing the productivity of the sector.
3. The lack of multiple codes per project is accounted for in the input/output table which will increase the incestuous relationship of the industry developing the regions cluster but the program was not strong enough to gain additional market share.

**SAO Comments:**

The assumptions made for the REMI analysis were not arbitrary and without merit. We discussed assumptions with REMI staff and made adjustments where necessary to appropriately evaluate the tax credit. The benefits to the state of biofuels projects as reported above by MASBDA include the impact of all state and federal subsidies and grants available for these projects, as well as private investment. The analysis presented in this report attempts to show only the impact of the APU tax credits and not the impacts of these other subsidies, grants and investments.