Ms. Katherine Collier  
Executive Secretary  
Mississippi Public Service Commission  
PO Box 1174  
Jackson, MS 39725

RE: MPSC Docket No. 2010-AD-2; Order Establishing Docket to Investigate the Development And Implementation Of Energy Efficiency Programs And Standards; Order Requesting Comments

Dear Ms. Collier,

The American Council for an Energy-Efficient Economy (ACEEE) welcomes this opportunity to provide comments to the Mississippi Public Service Commission on the above-referenced docket.

ACEEE is a nonprofit research organization based in Washington, D.C. that conducts research and analysis on energy efficiency. ACEEE is one of the leading groups working on energy efficiency issues in the United States at the national, state, and local levels. We have been active on energy efficiency issues for more than three decades. In Mississippi, we developed an energy efficiency potential study covering electricity savings opportunities in 2013,¹ and for several years have provided technical assistance on energy efficiency topics.

Our comments below begin with some introductory remarks on energy efficiency in Mississippi, followed by comments in direct response to the Commission’s list of topics.

**Introduction**

ACEEE would like to commend the Commission for the significant progress that the state has made in energy efficiency since adopting Rule 29 in 2013. Energy efficiency investments reduce energy waste, lower customer bills, create local jobs, and stimulate local economic development by attracting businesses and improving business competitiveness. Utility energy efficiency programs cost about 2 to 5 cents per kilowatt-hour, which is much less than the cost of new power plants. Because utility energy efficiency programs generally cost less than supply-side options, investments in energy efficiency reduce costs for all ratepayers by allowing utilities to spend less on additional electricity and natural gas supply capacity. Every dollar invested in these programs typically produces more than $2 in benefits for all customers.

Since 2012, Mississippi has risen five spots on ACEEE’s *State Energy Efficiency Scorecard*, from 51st in 2012 to 46th in the most recent 2016 *State Scorecard*. Investments in energy efficiency have resulted in real, measurable savings for electricity customers in the state. Energy efficiency also supports 15,039 jobs in the state.² As shown

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by the electric and gas utilities’ 2016 Quick Start program reports, utility energy efficiency programs resulted in more than 71,000 MWh in net annual electricity savings and more than 780,000 therms in natural gas savings, equivalent to millions of dollars of savings for Mississippi ratepayers. These programs are also transforming markets. Recent collaborations between Atmos Energy and Entergy Mississippi have brought the price of Nest thermostats down to $24 each, making it easier and more affordable for utility customers to control their energy usage.³

While Mississippi is still in the earliest stages of energy efficiency, the progress made since the adoption of Rule 29 shows that policy and program actions can make a difference. Moving forward, the Commission can and should look to the successes, challenges, and lessons learned from Arkansas and other states across the country to further inform its investment in energy efficiency resources. For instance, in addition to the specific recommendations included in these comments, we encourage the Commission to consider the following principles that underlie successful energy efficiency programs.

Specifically, successful energy efficiency programs should:

- Provide access to energy efficiency to the broadest possible customer base;
- Provide stability and consistency of program offerings;
- Enable utilities to effectively plan to deliver high quality offerings; and
- Evolve over time to build on successes, lessons learned, changes in technology and markets, and other factors.

We look forward to supporting the Commission and other stakeholders in Mississippi as the state moves into the Comprehensive Phase.

a. Numerical Savings Targets: Please provide comments as to whether the Commission should develop state-wide or company-specific energy and demand savings goals and/or targets, and what the savings goals and/or targets should be.

Adopting energy savings targets for utilities is one of the most effective ways for a state to guarantee long-term energy savings. In 2015, states with energy savings targets achieved incremental electricity savings of 1.2% of retail sales on average, compared to average savings of 0.3% in states without targets.⁴ Since every dollar invested in energy efficiency generates benefits on average of about $2, ACEEE urges the Commission to set policies that encourage the maximum amount of cost-effective energy savings possible. We also strongly recommend that the Commission consider setting energy savings targets in conjunction with cost recovery mechanisms and performance incentives for the utilities.

Other states have established reasonable and escalating savings targets to support the evolution of energy efficiency programs and allow the broadest possible customer base to access energy efficiency. Savings targets should be based on experience during the Quick Start phase, and ramp up at a reasonable rate. A survey conducted by the Southeast Energy Efficiency Alliance (SEEA) in 2015 found that utilities throughout the Southeast have regularly achieved and exceeded savings targets (expressed as a percentage of annual sales) that increase

³ https://www.atmosenergy.com/ways-to-save/mississippi-smartchoice-appliance-rebates; http://www.entergy-mississippi.com/content/energy_efficiency/docs/Appliances_Tstat_Brochure.PDF
by 0.25% per year.\(^5\)

For example, annual energy savings targets in Arkansas began at 0.25% in 2011, and ramped up 0.25% per year, reaching 0.75% in 2013. More recently, the Arkansas PSC adopted steady targets that will achieve savings of 1% in 2019. This schedule allowed utilities to ramp up programs at a reasonable rate, while also offering time for a wide variety of stakeholders to weigh in on a future path for efficiency programs. Seventeen states also have targets in place for natural gas utilities. These are typically somewhat lower than targets set for electric utilities. For example, Arkansas has ramped gas targets up to 0.5% to date.

We recommend that the Commission set multi-year targets with a similar ramp-up rate as that adopted by Arkansas (e.g. in the first three-year phase, ramping up electric savings targets from 0.25% in year one, 0.5% in year two, and 0.75% in year three, and then ramping up to 1% or more in the following three-year phase). This gives utilities and consumers long-term certainty, allows strong programs to develop, and delivers maximum savings to businesses and households throughout the state. We recommend that the Commission set targets state-wide for both electric and gas utilities to ensure program equity across the state and simplify the planning and implementation process.

Based on the Rule 29 Annual Reports for 2016, utilities in Mississippi are on track to successfully meet the year-one target laid out above. For instance, CenterPoint Energy reported actual savings of 0.28% of its total annual energy sales,\(^6\) and Atmos Energy had savings of 0.21%. While Mississippi Power Co.’s report showed a minimal decrease in savings from 2015 to 2016 (.19% in 2015 versus .18% in 2016), they could meet a 0.25% savings goal with higher program budgets and improved and expanded programs and outreach in the Comprehensive Phase.

We recommend that the Commission set targets for at least three years at a time in order to give utilities certainty in planning and also to allow sufficient time for program evaluation before the next round of target setting begins. To enable utilities to plan and deliver high quality energy efficiency programs, the Commission may wish to establish a timeline that accommodates existing obligations utilities have, such as other filing deadlines. We also encourage the Commission prioritize program continuity. Whatever timeline the Commission chooses, we recommend that the Commission establish and clearly communicate timelines well in advance to enable the utilities, their trade allies and customers to effectively plan and maximize the success of these programs.

b. Industrial Opt-Outs: Please provide comments as to whether the Commission should permit industrial customers to opt out of participating in the comprehensive phase of Rule 29.

ACEEE recommends that industrial customers should not be permitted to opt out of participating in the comprehensive phase of Rule 29. Industrial energy efficiency programs can provide significant energy savings, often at a lower cost than programs targeted at most other sectors, making large customer participation one of the best ways to keep energy prices low for all customers. For example, a recent national study showed the cost of saved electricity for the C&I sector averaged 2.7 cents per kWh compared to 3.5 cents per kWh in the residential sector.\(^7\) Because industrial operations vary widely, a one-size-fits-all approach to program design is not likely to meet the needs of large customers, but many states have successfully implemented a variety of approaches to industrial efficiency programs. Successful approaches have entailed technical assistance and

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knowledge sharing, prescriptive rebates, custom incentive programs, and strategic energy management, with some programs offering an option for some customers to self-direct their contributions.

Programs for large customers have been an important component of utility portfolios during the Quick Start phase. For example, savings from commercial and industrial programs accounted for 42% of Entergy’s overall savings in 2016, but only 38% of total expenditures. Entergy reported that its custom program for commercial and industrial customers underperformed, likely due to lack of awareness and understanding of the program. However, the prescriptive portion of the Entergy Solutions for Business Program had significantly more demand than expected and was fully subscribed by March 2016. Mississippi Power Co. reported 15 participants in their large C&I program in 2016. The program accounted for 49% of the total savings reported for 2016, showing how important utility interactions with large customers can be in delivering savings to the entire service territory.

We recommend the Commission convene a workshop facilitated by a neutral party to discuss large customer program options with stakeholders, including strategies for evolving program offerings for large customers. These programs have gained momentum during the Quick Start phase, and we recommend that utilities be proactive in working with large customers to identify their needs and evolve program offerings accordingly.

If it is determined that traditional utility program offerings cannot continue to meet the needs of large customers, then stakeholders, regulators and utilities should work together with large customers to develop a self-direct program option. A self-direct option would allow certain classes of customers, usually large industrial or commercial, to “self-direct” their fees toward energy efficiency investments at their own facilities, instead of putting them into a broader, aggregated pool of funds. Self-direct programs can be structured to give large energy users greater flexibility and control of their fees for efficiency, while ensuring measurable, cost-effective energy savings are achieved for all customers in the utility system.

ACEEE has studied many of the existing self-direct options administered across the country and found a wide variation in structure and requirements. They typically have four common elements:

1. they define who is eligible;
2. they offer some form of “relief” from energy efficiency fees paid to the utility, such as a rebate against paid fees, escrow of fees, or credit of fees to the customer;
3. they are officially sanctioned by a utility, public service commission, or state energy agency; and
4. they expect energy savings from participating customers.

There are several key elements of successful self-direct options. In general, they should be developed as part of a larger portfolio of robust energy efficiency program options. They should also allow a wide range of eligible technologies, including CHP, and offer flexibility with respect to timing on the investment. A transparent mechanism is needed for customers to manage their individual fee contributions and apply funds towards their projects. It’s important that all stakeholders participate in the design and development of the self-direct program to ensure the approach to administration, implementation, and evaluation meet the needs of large customers while also serving the public interest.

Energy savings that result from the investment of self-directed funds must be adequately measured and verified, so good programs require routine and robust progress reporting, which enables savings to be counted toward utility savings goals and allows them to be included in long-term resource planning. ACEEE strongly recommends

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8 Entergy Mississippi Act 129 2016 Report
that, should the Commission choose to proceed with a self-direct option, evaluation and measurement procedures are prioritized.

Overall, ACEEE recommends that industrial customers should not be allowed to opt out of paying for energy efficiency. Energy efficiency provides benefits to the entire energy system and all its ratepayers. Just as all customers pay for power plants, all customers should pay for energy efficiency. In this section we have outlined several reasonable pathways for ways to work with all stakeholders and ensure successful inclusion of industrial customers in energy efficiency.

c. **Cost Recovery:** Section 106 of Rule 29 currently permits utilities to recover “the incremental program costs not already included in the then-current utility rates and the lost contribution to fixed cost (LCFC) associated with approved energy efficiency programs.” The Rule further states, “The Commission may decide to limit the time period during which utilities may recover LCFC.” Please provide comments as to whether any changes should be made to the cost recovery mechanisms that utilities will be permitted to utilize for purposes of the comprehensive phase.

The sustainability of energy efficiency programs requires that both utilities and customers see value in the delivery of these programs. Therefore, it is necessary to adjust the utility business model so that utilities are not harmed by any loss in sales that result from efficiency programs and have an incentive to deliver excellent programs to all customers and to achieve results. These business model adjustments (cost recovery, decoupling, and performance incentives) are commonly referred to as the “three-legged stool,” and ensure that utilities face proper incentives to invest in energy efficiency. Under this approach, the Commission should consider mechanisms to place efficiency on equal footing compared to other supply-side resources, both by removing the throughput incentive and offering a financial incentive for delivering energy savings.

However, we recommend that the Commission carefully review the lost contributions to fixed costs (LCFC) mechanism in the comprehensive phase. LCFC addresses the issue of lost sales due to implementation of efficiency programs. However, it may also pose a risk to ratepayers should utilities sell more energy than calculated in the test case. ACEEE outlines several drawbacks to lost revenue adjustment mechanisms (and LCFC) in its 2015 paper *Valuing Efficiency: A Review of Lost Revenue Adjustment Mechanisms.* In particular, LCFC does not remove the throughput incentive. In fact, utilities may have an incentive to sell more electricity. Should utilities earn profits above their revenue requirement, the current mechanism does not necessarily protect ratepayers from paying for this overearning. We recommend that the Commission consider ways to address the issue of ratepayer protections, either by adopting full revenue decoupling instead of the LCFC or by modifying the LCFC to require refunds in the case of overearning.

d. **Incentive Mechanisms:** Section 106 to Rule 29 further provides, “To address disincentives for energy efficiency investments, the utilities may propose an approach to earn a return on energy efficiency investments through a shared-savings or performance-incentive mechanism to make these investments more like other investments on which utilities earn a return.” Please provide any comments or recommendations you may have regarding the inventive mechanisms, if any, that utilities should be permitted to utilize in the comprehensive phase of Rule 29.

We encourage the Commission to allow utilities an opportunity to earn performance-based incentives. In a 2015 white paper, ACEEE found that states with performance incentives in place realized electricity savings nearly

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double that of states without performance incentives (0.9% and 0.5% of retail sales, respectively).\textsuperscript{10} Currently, 25 states allow utilities to earn performance-based incentives. States use a variety of incentive structures, including rewarding utilities based on shared net benefits, energy-savings, or multiple factors including energy savings as well as demand savings, job creation, and/or customer service quality.\textsuperscript{11} While we do not feel that any one of these approaches is preferable to another, we do recommend that any performance incentive include the following best practice principles:

- Performance incentives should be linked to verified energy savings, not spending.
- Performance incentives should be set in conjunction with specific energy savings targets.
- Performance incentives should be tiered, awarding utilities that surpass targets.
- Performance incentives should be capped at a reasonable amount.

ACEEE research finds that performance incentives are far more effective in states where these targets are tied to specific energy savings goals. Only seven states with performance incentives in place do not have energy savings targets. These states realized average savings of 0.4% in 2015. The 18 states with both incentives and energy savings targets in place realized savings of 1.1%.\textsuperscript{12}

Mississippi may wish to follow Arkansas in its performance incentive model. In December 2010, the Arkansas PSC issued an order approving a general policy under which the Commission approves energy efficiency performance incentives for IOUs in the state. Incentives have since been approved for all three gas utilities in the state and the two largest electric utilities in 2012 and 2013. Energy efficiency performance incentives are awarded annually for achievements ranging between 80% and 120% of the Commission-established performance goal. The performance incentive is awarded on a sliding scale so that the incentive is capped at 4% of program budgets for 80% achievement, and 8% of program budgets for 120% achievement.\textsuperscript{13} Other states have also set incentives as a percentage of net benefits, with a cap on earnings set at a percentage of program expenditures deemed reasonable by the Commission.

e. Cost-Effectiveness Test: Please discuss your view of the reasonableness of the cost-effectiveness tests used to assess performance in the Quick Start Phase, and whether these tests should be continued for the comprehensive phase programs. If you have any recommendations for changes, please specify them.

In considering changes to cost-effectiveness testing on Phase II, we encourage the Commission to clearly establish the policy goals it expects to achieve with energy efficiency programming, and ensure that cost-effectiveness screening supports those goals. The application of conventional (e.g., the California Standard Practice Manual) cost-effectiveness tests can vary from one jurisdiction, and even one utility to the next. Should the Commission choose to employ these tests, it should note both the limitations of the tests, as well consider lessons learned from other jurisdictions, and apply judgment in the applications of these tests.

ACEEE has found that the most widely used benefit-cost test is the Total Resource Cost (TRC) test, followed by the Utility Cost Test (UCT). We have also observed that the Ratepayer Impact Measure (RIM) test has become almost universally rejected as a primary test for decision-making, because it does not really measure the cost-


\textsuperscript{12} Molina & Kushler, \textit{supra} note 10.

effectiveness of an energy efficiency program. Rather, it is an indicator of the distribution of already sunk utility system costs. For that reason, we recommend that states not use the RIM test to make determinations about the cost-effectiveness of energy efficiency programs.

ACEEE has also found that even for the commonly-used cost-effectiveness tests, in many jurisdictions there is either an inconsistent or sometimes inappropriate application of those tests. For example, the TRC test, although most widely used as the primary test, can be challenging to implement because it requires quantification of all costs and all benefits (including participant costs and benefits in addition to utility costs benefits). While costs to utilities and participants are relatively straightforward, some of the participant benefits can be less straightforward, and as a result these benefits are often underreported. Utility system benefits, e.g. avoided energy and capacity costs, are also often underreported. We encourage stakeholders in Mississippi to review ACEEE’s recent national review that examined best practices on utility system benefits of energy efficiency.

There are tools that can help the Commission work with stakeholders to develop a thoughtful and balanced TRC or similar test. For example, the recently released National Standard Practice Manual provides guidance for developing cost-effectiveness tests using the Resource Value Framework. The manual guides regulators toward a balanced test that reflects state-specific policy goals. However, if the Commission does not wish to undertake a thorough evaluation of cost-effectiveness frameworks tailored to Mississippi policy priorities, including quantification of associated non-energy benefits, we recommend that the Commission consider relying on the Utility Cost Test. Since the UCT includes only readily-measurable utility system costs and benefits, it does not face the same issues of imbalance that we often find in the TRC. Furthermore, the UCT is an effective tool for evaluating energy efficiency as a supply-side resource.

We also note that there are cases in which the Commission may wish to waive strict cost-effectiveness screening, such as in the case of energy efficiency programs that are designed to address the specific needs and challenges of low-income customers. These programs are, by nature more expensive to implement, but achieve other public policy goals than just energy savings. According to an analysis conducted by SEEA in 2016, only one state in the region (Louisiana) explicitly requires low-income energy efficiency programming to be subject to the same cost-effectiveness screening criteria as other energy efficiency programs. ACEEE finds that exempting low-income programs for cost-effectiveness criteria or including an “adder” for health and safety benefits is a widely adopted best-practice.

Similarly, educational and market transformation activities that enhance the uptake of other program offering should not be subjected to cost effectiveness test, since it can be challenging to verify savings from these activities. It may be appropriate to put limits on the share of a program portfolio that is devoted to these

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14 In ACEEE’s last national survey in 2012, Virginia was the only state that reported still using the RIM test as its primary cost-effectiveness test. We understand that subsequent Virginia legislation has clarified that four different tests should be considered, and that no single test should be the primary determinant.


16 See https://nationalefficiencyscreening.org/national-standard-practice-manual/

17 However, we note that even if UCT is relied on for program approval processes, the TRC is still a useful test for utilities to use for program planning purposes.

activities, but budgets should be adequate to ensure customers are aware of the program offerings and are primed to participate.

Finally, we urge the Commission to require utilities to report both program and portfolio cost-effectiveness results within their Rule 29 annual reports, with final determination of cost-effectiveness done at the portfolio level. Consistent reporting will enable stakeholders to more effectively engage with utilities on issues of program design and also enable utilities to track program performance and adjust program design over time.

f. EM&V: Please address your view of the reasonableness of the EM&V activities that have been performed to date and whether there are any changes to the EM&V process that you recommend implementing in the comprehensive phase of Rule 29. In addition, please consider commenting on whether the utilities or the Commission should hire independent third party administrators to perform EM&V services, or to review the EM&V data submitted by utilities.

Energy efficiency EM&V methodologies and practices must meet the three critical objectives of evaluation:

1. Accountability of the impacts: Did the program deliver its estimated benefits?
2. Risk management to support energy resource planning: How certain are these savings?
3. Continuous improvement: What can be done to improve program performance in the future?

In meeting these objectives, a key challenge is balancing rigor and accuracy with ease of implementation and costs. There is no one way to strike this balance. Instead, it requires a series of decisions at the portfolio level, program level, and measure level, and a transparent and collaborative process with stakeholder input. In general, we find that the level of costs and rigor of EM&V should be commensurate with the magnitude of savings and the degree of uncertainty around existing estimates of savings. As a result, this may mean that different programs within a portfolio of programs require different EM&V approaches, and that periodic assessments examine whether the level of rigor versus costs are meeting the core objectives of evaluation.

For program administrators, typical costs for energy efficiency EM&V are currently 3-5% of annual portfolio budgets. The cost of EM&V varies with the frequency, complexity, and scope of data collection and analysis. Depending on the desired level of certainty in the results, measurements may be taken on an entire system or a single parameter, on every measure or a sampling of projects, more or less often, and for longer or shorter periods. Recent advances in data analytics and data availability provide a ripe opportunity to use enhanced EM&V techniques while also managing costs. ACEEE recently examined opportunities for these tools in a detailed report.

Uniform protocols are a useful means to ensure consistency and transparency in the EM&V process. While states have been developing and implementing EM&V methodologies for decades, recently a broader recognition of the need to coordinate has led to more national and regional initiatives focused on energy efficiency EM&V. These national and regional initiatives are explained in more detail in ACEEE’s EM&V

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19 Consortium for Energy Efficiency, Annual Industry Reports, [https://www.cee1.org/annual-industry-reports](https://www.cee1.org/annual-industry-reports)
Toolkit. We recommend that Mississippi draw upon this large toolkit of best practices, protocols, and resources such as reporting guidelines when developing state-specific uniform protocols and incorporating Mississippi-specific information and data.

One mechanism that several states have used successfully is to establish a stakeholder working group that is responsible for oversight and input into decision making regarding EM&V considerations, such as those described above. Having a well-designed collaborative stakeholder process to oversee EM&V activities and reporting can help assure that evaluation is independent and objective, and minimize subsequent disputes and litigation over reported results. Because EM&V is an ongoing activity – occurring throughout the energy efficiency planning, implementation, and evaluation process – there is need for continuous involvement by an EM&V stakeholder group throughout the process. We encourage the Commission to consider working with stakeholders to establish such a working group or collaborative in Mississippi.

Technical resource manuals (TRMs) are also a helpful way to improve consistency by clearly communicating information such as deemed savings values and deemed savings calculations. TRMs are typically developed for entire states or regions, and require periodic reviews and updates. For Mississippi, the existing Arkansas TRM is a helpful and appropriate resource to draw upon. State-specific information could then be used as available and necessary to make certain amendments or supplements. Mississippi can likely leverage federal resources, including US Department of Energy grants, to supplement and tailor the Arkansas TRM using Mississippi data.

Finally, we believe that the Commission can ensure evaluation is thorough and independent while also containing costs. Should a third-party statewide evaluator prove too costly, we recommend that the Commission allow utilities to undertake their own evaluation using uniform and transparent protocols. The Commission can then engage an independent consultant to review these evaluations and provide feedback and directives for modification.

g. General Quick Start Rule Feedback: Please state whether there are any Quick Start rule provisions you believe should be revised in the comprehensive phase or whether there are any new provisions that you would recommend including. Please also provide any additional considerations, not specifically addressed above, that you would like the Commission to consider as it moves forward to the comprehensive phase of Rule 29.

ACEEE commends the Commission for the progress made in energy efficiency in Mississippi during the Quick Start phase. We hope that moving into the comprehensive phase, the Commission will also pay consideration to the following:

- Energy efficiency programs provide benefits to all customers in a utility system, not just participants in those programs. ACEEE research shows that utility energy efficiency programs have a wide range of benefits, such as the avoided cost of producing energy and building plants, that accrue to the utility system as a whole and to all customers in that system.
- Both utilities and customers should benefit from delivery of efficiency programs. The Commission can

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22 http://aceee.org/sector/state-policy/toolkit/emv
24 Baatz, B. supra note 15.
enable this by adopting the three-legged stool approach to the utility business model and setting long-term energy savings targets.

- Program offerings should be well-thought out and evolve over time. The Commission can enable this by engaging a stakeholder working group to provide input on the best ways to target segmented customer classes and explore innovative program approaches.\(^\text{25}\)
- Program success should be verified and tracked in a standardized way. The Commission can enable this by setting clear rules for cost-effectiveness testing and evaluation and by working with utilities to ensure standardization in annual reporting.

ACEEE welcomes this opportunity to provide comments.

Sincerely,

\[\text{signature}\]

Annie Gilleo  
Senior Manager, State Policy  
ACEEE  
\text{agilleo@aceee.org}  
202-507-4002

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\(^{25}\) See, e.g., Johnson, Katherine. \textit{All Together Now! How Collaboration Works in Arkansas.}  
\text{http://www.academia.edu/9361374/All_Together_Now_How_Collaboration_Works_in_Arkansas.}