

**Arkansas Alternative Energy Commission – Final edits for 2014 report  
December 16, 2014**

- 1. Read, edit and approve study presentation summaries**
- 2. Finalize recommendations for this year’s report**
- 3. Suggestions for approaching the new administration**

**Item #1: The following “study presentations” have been added to this year’s report. A short summary of each is required for our report. The following summaries must be edited and approved for the final report.**

- a) **Legislative Review: Rep. Warwick Sabin and Rep. John Hutchison, Arkansas State House of Representatives, 05/23/13**
- b) **Hydropower: Gene Higginbotham, Executive Director, Arkansas Waterways Commission, 05/23/13**
- c) **Basic Hydro Concepts, Federal Hydro System in AR, Hydro Opportunities at COE and Other Facilities: Lee A. Beverly, Project Manager, US Army Corps of Engineers, 05/23/13**
- d) **Small Hydro/Hydro Kinetics: Mark Lassman, Director of Energy Trading, Free Flow Power Corp., Boston, MA/Tulsa, OK, 05/23/13**
- e) **Status on Enhanced Energy Code: JD Lowery, Policy and Sustainable Energy Manager, Arkansas Energy Office, Arkansas Economic Development Commission, 09/19/13**
- f) **“AAEA Overview, Issues and Initiatives,” Mr. Steve Patterson, Executive Director, Arkansas Advanced Energy Association, 11/21/13**
- g) **Mission and Projects: Arkansas Chapter of Interfaith Power and Light, Ms. Scharmél Roussel, Executive Director & Reverend Steve Copley, Board Chairman, 03/20/14**
- h) **Hydroelectric activity/potential within the United States and Arkansas: Jeff Leahey, Esq., Deputy Executive Director, National Hydro Association, 03/20/14**
- i) **Co-generation Initiatives—Arkansas Opportunities: Tom Howard, Domtar Corporation, 06/19/14**
- j) **Review Status of State Energy Plan: JD Lowery, Director, Arkansas Energy Office, Arkansas Department of Economic Development, 10/20/14**

**(Please see the attached forms for the summaries from the commission.)**

**Item #2: Recommendations for the 2014 Report – Let’s finalize a list for this year’s report.**

From Commissioner Allen: **I think we should keep all of the old recommendations in our 2014 report. Maybe we should present them as 2010 and 2012 recommendations.**

**Suggestions from Chairman Hauser from the 2010 report:**

- *Manufacturer incentives to encourage adoption of energy efficiency measures. Since November of 2007, a number of energy efficiency programs offered by the utilities specifically target manufacturers, as well as other commercial and industrial customers. A number of these larger consumers of energy have participated in these programs.*
- *Consumer-based incentives, including low-interest revolving loans, rebates and tax incentives. A number of energy efficiency programs approved by the PSC include rebates for energy efficiency measures. The AEO and ADFA are considering a statewide revolving loan fund as an alternative financing mechanism at lower interest rates for borrowers interested in pursuing energy efficiency measures.*

**Suggestions from Chairman Hauser from the 2012 report:**

**The Commission recommends that the State develop alternative financing mechanisms to encourage energy efficiency and renewable energy retrofit projects.**

***1) Property Assessed Clean Energy (PACE)***

- *Would allow building owners to finance Energy Efficiency improvements at a lower interest rate.*
- *The participants repay the borrowed loan amount as a line item assessment thru their county assessor’s office.*
- *The loan amount stays with the property, and does not follow the borrower in the event the property is sold or changes hands.*
- *Default rates are low, typically between 1 and 3 percent.*
- *The program is voluntary.*
- *The Real Estate, Finance and Insurance sectors should support PACE since it captures investment in real property through value added Energy Efficiency improvements, which translate into more value, higher resale, and higher commissions.*

***2) A Loan Loss Reserve to leverage the creation of a Statewide Revolving Loan Fund, (RLF).***

**The Commission recommends the creation of a statewide district for the purpose of achieving more attractive bonding capacity to encourage investors, while achieving more attractive interest rates for potential borrowers.**

**The Commission recommends that these alternative financing mechanisms be centralized through a single state agency, or the Arkansas Development Finance**

**Authority (ADFA). ADFA would be responsible for development, bonding, marketing, deployment, and defaults.**

**The Commission recommends that ADFA apply the Qualified Energy Conservation Bonds (QECB) to create a Loan Loss Reserve to leverage the creation of a statewide Revolving Loan Fund as an alternative financing mechanism to encourage Energy Efficiency and Renewable Energy retrofit projects.**

**The Commission recommends that Arkansas develop and expand Bioenergy / Biofuel opportunities in Arkansas particularly given our abundant resources in agriculture and forestry.**

**The Commission recommends incentives and programs to encourage investments for:**

- **Feedstocks, and Biomass feedstock supply chains;**
- **Biorefineries for producing Biofuels;**
- **Biopower for Stand-alone power, Co-firing;**
- **Co-generation; and biochar coproducts.**
- There are several commercial-scale bioenergy opportunities for Biorefineries, particularly for drop-in Biofuels; Biopower for co-firing; Co-generation; and Integrated Biorefineries, Combined Heat and Power (CHP) operations; as well as bioenergy and biochar coproducts.
- Action is needed for expanded efforts to attract Bioenergy projects and investment, and including a pilot Renewable Portfolio Standard (RPS) program.
- Arkansas needs an updated statewide feedstock assessment; Assessments of co-firing potential at Arkansas' four (4) coal-fired power plants; as well as support for farm-scale litter-to-heat-and-char systems.

**The Commission recommends incentives and programs to encourage biomass and bioenergy production in Arkansas, particularly for converting low-value agricultural and forestry residuals into higher value energy products, as well as production of dedicated biomass energy crops.**

- The Commission recommends support for biopower and biofuels production, as well as biothermal energy where feasible. Biopower options in Arkansas could include co-firing of biomass with coal at existing coal-fired power plants, stand-alone electrical generation from biomass, and combined heat and power (CHP), in which integration improves system efficiency. Biofuels options in Arkansas could include cellulosic ethanol or drop-in biofuels that are chemically the same as petroleum-derived liquid fuels; these biofuels could be made from a wide range of residues, purpose-grown energy crops, or even the biogenic fraction of municipal solid waste.
- Stand-alone electrical generation from biomass should be encouraged where feasible with an understanding that integration can improve efficiency significantly. If the cellulosic fermentation process is supported, then it should

integrate with a host to improve efficiency, for example, the pulp and paper industry in Arkansas may be a good fit for lignin precipitation, and further processing into biomass fuels.

- Oil-seed for Arkansas may make sense if feedstock is grown on marginal land and can be contracted for a low cost.
- Gasification or catalytic pyrolysis makes sense long term, but capital costs must come down to improve returns.
- Combining biomass to coal or natural gas production of liquid drop-in fuels makes sense economically.
- Arkansas should move forward with these Bioenergy options, but state policy, incentives and programs are critical. There are several federal support programs that already exist.

**The Commission recommends the State develop a comprehensive natural gas utilization plan as an alternative transportation fuel.**

- Arkansas has an abundance of natural gas resources. Compressed natural gas (CNG) represents an Arkansas natural resource that can be used as viable transportation applications, thereby reducing reliance on imported petroleum-derived fuels. CNG represents significant economic opportunities for Arkansas. Using natural gas for transportation energy represents savings opportunities for consumers by mitigating rising petroleum-derived fuel costs and utilizing indigenous resources. In some applications, CNG lowers vehicle maintenance costs, increases the useful life of CNG vehicles, and is ideally suited for CNG fleet vehicles with high mileage demand.
- CNG conversions will improve air quality by lowering greenhouse gas (GHG) emissions by as much as 25% per CNG vehicle conversion. Therefore, CNG supports improved environmental air quality through reduced smog emissions.
- The utilization of indigenous natural gas for transportation energy supports Arkansas' energy security. The use of CNG would make Arkansas more energy self-sufficient, and insulate our state economy from the potential shocks of market, price or commodity volatility experienced with traditional petro-chemical products.
- Since natural gas is a domestic resource, the drilling, transport, and operations of end user distribution facilities would create long-term, high-wage jobs.
- The use of natural gas in transportation applications support the federal mandate for the United States to become energy independent, and reduce our dependence upon imported fuels. Equally, Arkansas has an opportunity to become more energy independent through the utilization of an instate resource, natural gas. This will encourage our own energy independence, and reduce our dependence upon imported fuels, and create more energy security for Arkansas.

### **Item #3: Suggestions for approaching the new administration**

**From Chairman Sabin:** We need to utilize this opportunity to make our goal and wishes clear and begin a dialogue on alternative energy sources with these new leaders.

**From Chairman Hauser:** I would suggest that we focus on the business creation & state revenue aspects of alternative energy issues; maybe asking the AEDC to provide fiscal estimates on certain scenarios. I would also suggest that we focus on educational opportunities (trade school) to enhance our workforce in the skilled labor areas of alternative energy businesses.