



## Wyoming Department of Education

Dr. Jim McBride, Superintendent of Public Instruction  
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### MEMORANDUM NO. 2009-022

**TO:** School District Superintendents  
School Principals

**FROM:** Jim McBride, Ed.D. 

**DATE:** February 6, 2009

**SUBJECT:** White Paper on Energy  
WDE Legislative Issues

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### FOR YOUR INFORMATION

Enclosed are two letters that I sent to our legislators and I wanted to share them with you also. At the beginning of each New Year, I send a personalized letter to all Wyoming legislators laying out the WDE legislative agenda and our positions on the issues that I'm aware of at the time. As most of you know, I also serve on many other boards and commissions, which led me to write the second longer note. In that piece I was trying to get our lawmakers to think about the larger issues with a more comprehensive view. Note that I sent a copy to the President of the University of Wyoming and the Dean of the UW School of Energy. My reason for sending this note to you is that we may be looking for some volunteers to pilot several of these programs.

Keep up the great work, thanks!

JM:wk

Attachments



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January 7, 2009

Dear Legislator:

The New Year finds you packing your bags for the upcoming general session. Thank you for your service to the state. This correspondence will serve as a brief on the key issues we are working on within the Wyoming Department of Education. We will provide key contact information, and as always, offer to be of service whenever appropriate.

After more than a decade of new initiatives and education reform, we have taken this year for a collective deep breath. For the first time since 1995, your session will find K-12 occupying the back burner in terms of new initiatives and requests. Given the national economy and the state's need for fiscal restraint, I think our timing is good!

We continue to implement major legislative initiatives of the past few years. This includes: **Hathaway Scholarship Program.** When your session begins next week, approximately 4,200 Wyoming students will begin the spring semester as the recipient of a Hathaway scholarship. Of this number approximately 2,100 are attending one of the seven community colleges; approximately 2,100 attending the University of Wyoming. We will expend just over \$11 million in scholarships for the current school year. (I emphasize the fact that all numbers are estimates.) Expenditures from the proceeds of the Hathaway Scholarship Program are running very close to estimates established when the program was created. The bottom line: The fund is accommodating the current load. Any increase in the scope of the program will need to include a financial contribution to the trust fund.

Each year we report many details on the Hathaway Scholarship Program to your Joint Education Committee. Among the most important items was the data telling us that students taking a more rigorous core curriculum receive higher scholarships, and are also more likely to keep their scholarship.

**School Foundation Funding.** In a report hot off the presses, "Education Week" magazine reports Wyoming's expenditures per student as the second highest in the nation (as adjusted for regional costs) and awards our finance system the second highest score based on equity indicators. Some of you may recall years of low grades, and accompanying painful press from Ed Week in years past. Congratulations, their reports have finally caught up with your good work. Payments made in the form of a block grant to Wyoming's 48 school districts totals \$1.162 billion for the current school year. Funds for summer school, instructional facilitators, major maintenance and school construction are all in addition to that amount. Our average expenditure per ADM is \$13,437 for the current year.

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**Enrollment.** Wyoming's current K-12 enrollment is approximately 86,494 students. This represents a statewide increase of 1.1 percent. Some of you may have heard of significant growth in some school districts, so a quick look at the numbers seems appropriate. Campbell County School District (Gillette) is reporting the largest with 395 new students, for a growth rate of 5.2 percent from one year to another. Sweetwater County School District #1 (Rock Springs) is reporting 217 new students (4.6 percent). Laramie County School District #1 (Cheyenne) is reporting 159 new students (1.2 percent). I emphasize again that these are very preliminary numbers and certainly may be impacted by the current change in economic condition. We will work to verify the data, and it is typical to see the numbers decline slightly by the end of the school year.

**Implementing last year's initiatives.** Last year you authorized important work in three key areas: career-technical education, distance education and programs for at-risk students. We are implementing exciting pilot programs to reform the delivery of career-technical education. We are working in three districts on this effort--Laramie County School District #1, Campbell and Teton County School Districts. New rules governing the delivery of distance education have been finalized, under the umbrella of new laws passed last session. Several grants have been made to Wyoming educators for the creation and delivery of distance education courses. We continue to review the delivery of at-risk programs to our most needy students, with an in-depth report required for next fall.

**Charter schools.** The Joint Education Committee has given initial approval of legislation to improve the process for application and review of a charter school at both the local and state level. This initiative comes to you from the State Board of Education, and deals exclusively with process. You will likely consider other legislation concerning charter schools. I support improvements to the process as a means to establish a level playing field for all involved. I will refrain from commenting on any of the other proposals.

**No Child Left Behind.** The national elections bring a new perspective on the federal role in education. There is widespread agreement on the need to improve the current No Child Left Behind law, but I advocate both caution and patience. With an economy in trouble, and two wars to address, it is my opinion that the President-elect will not have time to propose and orchestrate NCLB revision as a top priority. The law's key elements of accountability, assessment, disaggregating data, and public reporting are likely to remain in any context.

**PAWS.** Our statewide assessment is required by both state and federal law. We have made a number of improvements on this assessment over the past years. Last year's testing, as well as the reporting of results went fairly well. In the next few weeks we will have additional information to share in this area. The 2009 versions will be administered during a testing window that runs from March 11 to April 15. Districts are given wide latitude in the scheduling of the assessment. The actual test time per student should be approximately nine hours.

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**The WDE legislative agenda.** As referenced earlier, our 2009 agenda is quite small--and is related only to the complete implementation of laws and initiatives that you began. You will see legislation to improve the administration of the Hathaway Scholarship Program. Two key areas are being addressed. First, the ability of districts to track and report on students taking the required success curriculum; and second, an effort to improve on the required "8<sup>th</sup> grade unit of study," which guides students to select the appropriate courses.

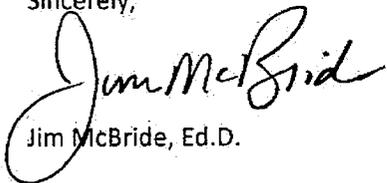
In the school finance area, we seek continuation of programs which were funded in the last session. These programs include augmenting existing funds for instructional facilitators; subsidizing school lunch programs; and an enrichment program for students. These programs are ongoing during the current school year, and we have asked to continue funding in order to provide a more thorough report to your Joint Education Committee next interim.

WDE is most appreciative of the working relationship we have built with your Joint Education Committee. We are required to submit reports and data on several programs, and these reports are available through your LSO office, or on our website. As always, we are eager to assist legislators in their work. Please contact us.

I am enclosing a sheet which provides critical contact information on the top staff at WDE. I encourage you to start that contact with either me or Mary Kay Hill. That said, any member of our staff is available to you.

Travel safely to Cheyenne. I look forward to a productive general session.

Sincerely,



Jim McBride, Ed.D.

Attachment: WDE Contact Sheet

CC: Governor Dave Freudenthal  
Secretary of State Max Maxfield  
State Auditor Rita Meyer  
State Treasurer Joe Meyer  
President Tom Buchanan, University of Wyoming  
Executive Director Jim Rose, Community College Commission



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February 2, 2009

Dear Legislators,

You'll probably be surprised to learn that I think about things other than education but, as you know, the boards and commissions I am assigned to often allow me to refocus.

I had the pleasure of attending both Republican and Democratic caucus sessions. It was interesting to me that on the Republican side the focus was on energy, mostly wind energy and our electric grid. Now that you have the Bills that you will work, I thought there may be time for some "big think issues." I'd like to share with you some of my personal thoughts about energy, specifically Wyoming's energy and our need for a comprehensive energy plan. Fundamentally, and maybe aside from the planning question, we should ask ourselves do we want to lead or be led? Do we want to demonstrate the viability of some alternatives or let the alternatives be developed around us?

We've all heard how important it is for the U.S. to have a comprehensive energy plan; one that addresses all the types of energy, their origin, their integration, use and distribution. I believe Wyoming needs exactly the same thing. It may be that we have the expertise and capacity here in the state or it may be that we [mostly you] would want to hire someone who can complete a comprehensive study and guide us toward a fully integrated, comprehensive energy plan. This plan would clearly have to be coordinated with surrounding states to fully address upgraded grids, efficient energy distribution and long term interstate solutions. In the energy discussion, one could start anywhere but wind seems to be in vogue.

Before the economic downturn, I counted projects totaling about 5000 electric generating wind mills on both private and state land. The SLIB has considered several land leases for such projects. Our discussions centered on fair lease prices. I believe we have the tax structured about right to make sure wind energy will always generate revenue for our state. I believe we have to do a better job, to the extent that it is legal, of discussing, coordinating, and informing private land owners of pending projects adjacent or near their land. Additionally, there will come a time soon when federal lands will come into "wind" play. We [again, mostly you, I think] should consider parity in terms of treatment and revenue generation between state, private, and federal lands.

Additionally, I am concerned about "carbon credits" [which I have not yet bought into – I'm also not sure about carbon sequestration unless it is being used to produce oil!]. A number of recent studies [Google, "man's impact on global climate change"] call into question the entire concept; that said, it does seem that this train has left the station. Do we have state laws in place that would mandate an exchange [balance] of carbon credits generated by wind [or solar] for electricity generated by coal? When we export the electricity generated by coal can we export the deficit carbon credits too? During high wind days, as I understand it, we have to power back our coal electric production because we do not have adequate transmission capabilities. If the carbon credit concept is forced on Wyoming, can

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we hold our electric credits to balance coal credits? Is there something else we could do with the electricity besides dumping it in the grid?

Imagine if a state partnership with our University's School of Energy Resources, the Department of Education, the Department of Transportation, other state agencies, and our industry partners got together with your support and worked to demonstrate the viability of several alternatives. Further, imagine a pilot project where some of our school buses, state vehicles or local community transportation vehicles were driven by fuel cell technology, with hydrogen provided by electrolysis [of water] generated by excess electricity from wind, solar or not-yet-mentioned nuclear.

In the early 90's, while I was assigned to the Pentagon, I visited a company called Ballard Power Systems. Ballard is one of the world leaders in the development, manufacture, sale and servicing of hydrogen fuel cells. During my visit I had the opportunity to ride in several fuel-cell driven buses. They were zero emission, clean, quiet and powerful.

The theoretical maximum efficiency of the electrolysis of water is between is about 85%. So using full price electricity to separate water into hydrogen and oxygen would not be economical unless we were using low cost or excess electricity.

As you know, we have 48 school districts. Statewide we have 1000 buses and we buy about 100 a year. [All are gross averages]. Imagine several pilot projects where school districts [communities or DOT] in partnership with UW and the energy industry demonstrate the viability of cheaply produced hydrogen being burned with zero emissions in some of our school busses. Consider other pilot projects but instead of hydrogen and fuel cells we substitute Wyoming liquefied natural gas, propane, or coal bed methane. Each would have a significant upfront cost; each would demand interagency cooperation, and each is completely doable with today's technology. [The beauty of school buses is that they are almost all refueled at the exact same place every day. No extensive fuel distribution system would be necessary. Hybrid buses, like cars are available, they are not the solution--mileage not high enough, cost prohibitive.]

Recently, our Director of the UW's School of Energy Resources submitted a paper to the Joint Minerals, Business and Economic Development Committee which outlined a "plan for developing research ...on important aspects associated with the extraction and handling of uranium;" see, <http://www.uwyo.edu/sersupport/UW%20Uranium%20Plan%202.pdf>. Consider the possibility of taking that one huge step further. When most of us think about nuclear power plants we think of Three Mile Island [1979] or Chernobyl [1986] but the United States have been using nuclear power to drive submarines, aircraft carriers and satellites for decades. These power units, although having special requirements, are much, much smaller, pilot project size small! Why not extract, handle and process our own yellow cake material and use it to develop a different approach [size] to nuclear power. Smaller plants could easily power any of our towns.

Yesterday, I had a pleasant visit with Mr. Hu Wang, a retired Engineer. He reviewed with me a five-page plan to build "A Zero-Emission Coal-Fired Power Plant." The technical details aren't all there but

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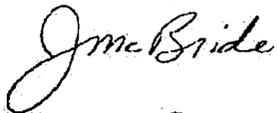
what is of interest is that his plan needed pure oxygen--a byproduct of the electrolysis process I previously discussed. Again, his plan looks completely doable. If anyone would like his paper I can provide you copies.

Returning to education for a moment, I'd like to make my final point. Many of the graduating class of 2009 will be attending our community colleges or our University. Most of their transcripts [student records] will be transferred to the colleges completely electronically. By the class of 2010 I hope to have "electronic transcribing" in place for all of our schools. Picture an e-mail like request, in a secure environment which could be responded to in seconds and delivered in minutes between and among all schools. We [Wyoming] are almost there! Imagine further in a few years, as schools make changes to their student records our [WDE] computers would pick up the changes the next evening as our computers compare data bases and automatically update, no paperwork, no forms, no mailings, and no request for additional data. No state in the nation is even close to Wyoming in this area. It took only vision, capability, resources and the will. In terms of energy that is what we need in Wyoming.

To address our wealth of energy resources and diversify the economy in Wyoming, we only need two things. We need to decide whether we want to lead or be led. If, like my example of our student management data base, we believe that we have the vision, the resources and the will to lead the nation, then we should. Secondly, we need to commit to a comprehensive energy plan that addresses all of our carbon and alternative energy, one that includes their origin, integration, use and distribution. We have an unplanned windfall coming by way of the President's stimulus package. I understand there will also be a great deal of flexibility in at least some of funds. This may be the opportunity we need to develop and lead the energy road ahead for the nation.

Thanks so much for your time and attention.

Sincerely



cc: Governor Dave Freudenthal  
Secretary of State Max Maxfield  
Treasurer Joe Meyer  
Auditor Rita Meyer  
President Buchanan  
Director Mark A. Northam  
School Facilities Commission  
Wyoming School Superintendents