Stephen L. Beshear
Governor

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KENTUCKY ENVIRONMENTAL QUALITY COMMISSION
PUBLIC FORUM

Meeting Minutes

June 3- 4, 2010
300 Fair Oaks
Frankfort, Kentucky

EQC Commissioners Present

Scott Smith, Vice Chair
Gordon Garner, Vice Chair
Laura Knoth
Eugene Zick
Stephanie McSpirit
Kimberly Holmes

EQC Staff Present

Arnita Gadson, Executive Director
LaTisha Barnett, Executive Secretary

Speakers/Representatives Present

Valerie Hudson, Deputy Commissioner -DEP
Carl Campbell, Commissioner- DNR
Talina Mathews, Assistant Director – EDI
Lona Brewer, Program Manager – EEC
Sandy Gruzesky, Director, DOW
Tony Hatton, Assistant Director – DWM
Chris Tyler, US Bldg Council
Mark Ryles, Facilities Mgt. – Ky Dept. of Education
Martha Tarrant, Ross-Tarrant Architects
Robert Rogers, Facilities Rep. – Warren County Schools
John Voyles, E.O.N. US, VP

The Environmental Quality Commission (EQC) held its annual meeting on June 3-4, 2010. The meeting was called to order at 9:00 p.m. by Commission Chair, Scott Smith.

PUBLIC SPEAKERS:

Valarie Hudson, DEP Deputy Commissioner, provided the DEP update. The Department for Environmental Protection is the state agency with primary responsibility for the protection and management of Kentucky's air, water, and land resources. The department currently has approximately 750 employees. Most of the agency's employees are located in Frankfort. However, the department also staffs 13 regional offices that are spread across the commonwealth. The department oversees the activities of more than 100,000 entities. These entities include federal DOD and DOE facilities, major industries, small businesses, communities, and individuals.

The department implements dozens of programs that are primarily modeled after federal environmental laws. The agency's core functions include:

- Measuring environmental conditions,
- Setting protective standards,
- Ensuring acceptable performance, and
- Correcting existing problems.

These core functions are administered through the following activities:

- Monitoring,
- Permitting,
- Inspections,
- Assistance,
- Remediation, and
- Enforcement.

During SFY2010, in addition to the 'core agency activities' previously discussed, DEP continues to focus on key foundational issues:

- Statewide budget reduction implementation (20% GF reduction from SFY08 to SFY09). SFY10 cuts so far have been about 1.5%.
- Replacing key staff retirements and dealing with budget reductions (~ 10% of staff retired in FY2009).
- Permit review backlog (goal of zero backlog). Regulation development update and revise).

In addition to these ongoing core challenges, the Department is also faced with a number of new and old challenges.

General Fund Reduction Impacts

- Loss of over 100 positions. DEP's FY06 cap was 863. Currently 745 positions filled of 774 funded.
- Impacts to DEP's ability to permit, inspect, enforce and monitor mandated activities.

- DEP has been forced to use restricted fund dollars to fund minimum levels of personnel for program implementation, instead of utilizing these funds for their intended purposes (cleanups of impacted sites).

U.S. EPA – Regulation of Coal

- Unprecedented federal EPA regulatory actions:
    1. CAA – Revision of NAAQS for Ozone, Lead, NO2, SO2, NO2/SO2 Secondary, CO, PM. New regulation of GHG's. KY Climate Action Plan. PM2.5 Surrogacy policy. Redefine the source litigation.
    2. CWA – Revision of Effluent Guidelines for Steam Electric. Revision of 316(b) covering water intake requirements. Significant new requirements for Appalachian coal mining for 402, 404, and SMCRA. Revision to antidegradation requirements.
    3. RCRA – Evaluation of and development of new requirements for ash ponds and ash landfills – coal combustion wastes (CCW) waste classification and structural integrity requirements.

Impact of the new U.S. EPA rules?

- More questions than answers:
    1. What is the cost to implement and comply?
    2. How long do facilities have to comply?
    3. Can states implement the new rules in a timely manner and in light of current economic conditions?
    4. More federalism and less states rights oversight?
    5. Is federal legislation going to occur regarding GHG's?
    6. What is the future of coal?
    7. What is the future of the nation's energy supply?
    8. What is the impact to industry, states, communities, and citizens of these new rules and changing federal policies?

DEP Strategic Operational Plan & Annual Reports:

- The SFY2010 DEP strategic operational plan is available on the Departments; website (http://dep.ky.gov/).
- Final SFY2009 Division Annual Reports are available on the Department's website.
- Contacts: (502) 564-2150
    1. Valerie Hudson, P.E., Deputy Commissioner – Valerie.Hudson@ky.gov
    2. R. Bruce Scott, P.E., Commissioner – Bruce.Scott@ky.gov

Carl Campbell, Commissioner of DNR, presented the Commission with an update as well.

Ongoing Initiatives:

- Flyrock Reduction
- Use of ARRA funding for multi-agency flood control projects in Fleming and Todd Counties.
- Assumption of Class II Underground Injection Control primacy from EPA
- OMSL Mine inspection / Mine rescue training
    - Have met increased MSHA training requirements for mine rescue team coverage of KY mines and have met inspection mandates.
    - Number of Licensed Mines: 1st Qtr 2009 – 263 surface and 207 ug, 5/21/2010 – 206 surface and 174 ug
- Reduction of Mine Permitting Delinquencies

  Brought retirees to help to rid delinquencies over 65 days. Hired engineers to do slurry applications. Reduced delinquent permits by 33%

- CHIA Implementation
    - Staff assembled, including 4 OSM interns
    - Currently working on basin templates
    - Writing individual permit CHIA's
    - Working on EPA grant for HUC 12 trend stations
- FPOP Implementation
    - RAM 145 issued 12/18/2009
    - USACE requires FPOP for issuance of a 404 permit
- Utilization of Increased AML Funding
    - Funding has more than doubled in the past several years. AML has increased staff, used more contractors to design projects and provided additional guidance on project design.

Legislative Updates (2010 Session):

HB 283: Increases mine permit fees above flat $375 established in 1982. Directed all amounts over $375 to DMP restricted fund. Retained distribution of 1/3 of original $375 to the county in which operation located. New fees are: $2,500 NW; $1,750 AM or MA; $750 MI, RN, or SU (transfer).

HB268: Increases training requirement for blasters license renewal from 16 hours every 3 years to 8 hours annually (24 hours/3 years). Also, increases mining subsidence insurance from $100,000 to $300,000 per structure.

HB215: Allows Division of Mine Reclamation and Enforcement to send Notices of Noncompliance and Cessation Orders via electronic certified mail.

New Initiatives:

- MOU with EOC to provide cave divers for mine rescue.
- New database of miners with pending MSRC sanctions.
- Assumptions of AML Emergency Program from OSM.
- Commissioner's outreach to citizens' groups.
- Electronic data submittal (partnership with DEP).
- Revision of oil and gas regulations.
- Mississippi River Basin Initiative (DOC).
    - Multi-partner study designed to document the effectiveness of carefully monitoring conservation practices at improving downstream water quality by reducing nutrients, soil erosion and stream sedimentation.
    - Kentucky is submitting grant proposals to look at three 12 digit HUC watersheds.
- Implementation of Kentucky Assessment of Statewide Forest Resources Strategy.
    - Implementation of USFS approved Kentucky Assessment of Statewide Forest Resources strategy for program development and delivery.
    - Begin work on federally funded Southern Appalachian Mixed Mesophytic Initiative (SAMMI).
- Southern Appalachian Mixed Mesophytic Initiative.

Federal Developments:

- EPA Involvement in Coal Mine Permitting
    - EPA is seeking to strengthen protection of streams in the Appalachian region from coal mining impacts.
    - Initial focus was on CWA 404 permits, but has since expanded to include to 402 (KPDES) and 401 WQC.
    - EPA guidance consistently recommends conductivity limits that are likely to be attained using current mining practices.
    - Refusal of USACE and DOW to include these limits in their permits has brought a near halt to 402 and 404 permitting through the threat of EPA objections or vetoes.
- Interagency Coordination (Federal and State)
    - State and federal agencies involved in coal mine permitting are working out ways to coordinate site visits, jurisdictional determinations, pre-mining and during mining, sampling and monitoring plans, permit review and enforcement to more efficiently and effectively protect water quality throughout the permitting and mining process.
- SMCRA Stream Buffer Zone Rule Developments

- OSM is looking at replacing the Stream Buffer Zone Rule with a more comprehensive stream protection rule.

Budget Challenges:

- Budget cuts fall unequally on divisions depending on funding source.
  - Less affected – most of funding comes from federal /restricted funds, and supports federal or state mandated regulatory functions (permits, licenses, mine rescue) or non-regulatory functions (reclamation of abandoned mine lands).
  - More affected – most of funding comes from general fund, insufficient federal or restricted funding to support division functions such as cost sharing, stewardship, education and outreach. In DNR these are DOC, KDF, DOG.
- Loss of positions due to cross-the-board cuts will reduce staff available to support critical activities such as:
  - Inspection, enforcement and reclamation activities (DMRE, DOG)
  - Firefighting, stewardship, grant management, outreach activities (KDF, DOC)

- Inability to purchase equipment or pay for facility expenses:
  - Field vehicle replacement
  - Upgrade computer equipment
  - Firefighting and field equipment
  - Facility upgrades and repairs
- Training and travel restrictions
  - Reduced training opportunities for new staff
  - Reduced participation in district meetings, conferences, public outreach.

Opportunities for EQC Support: Activities that will benefit Kentucky's Natural Resources and Environment:

- Collection of water quality data (surface and groundwater) to identify trends, problems, valuable resources.
- Enforcement – inspection of permitted and unpermitted activities that impact water quality.
- Enhancement of Kentucky's forest, soil and water resources through stewardship and best management practices.
- Assessment and control of oil and gas well drilling impacts (water quality, surface disturbance)
- Electronic data acquisition and storage with public access
- Increase in Cabinet legal staff.
- Return to a comprehensive "State of the Environment" assessment that tracks trends in Kentucky's environmental quality.
  ("People manage what they measure." – Temple Grandin)

Talina Mathews, Assistant Director of EDI discussed updates of the Kentucky Climate Action Plan. It is not just an energy issue.

Purpose and Goals:

- Use Kentucky Seven – Point Energy Strategy as a foundation to develop a broad based climate strategy, recognizing that one size does not fit all.
- Review and approval of the current and comprehensive inventory and forecast of greenhouse gas (GHG) emissions in Kentucky from 1990 to 2030.
- Development and recommendation of comprehensive policy recommendations in key economic sectors in Kentucky through 2020. Recommendations will address Kentucky's response to any greenhouse gas mitigation policies likely to result from federal actions – Congress or USEPA.
- Development of recommended short, medium and long –term goals for statewide reductions in the amount of GHG's emitted by activities in Kentucky.
- An interim report of the KCAPC due by July 2010.
- A final written report of the KCAPC due by December 2010.

The kick off meeting was held on January 28, 2010:

- Reviewed purpose and goals
- Reviewed draft GHG Emissions and Inventory
    - revisions are underway
- Presentation of Draft Catalog and Descriptions
- Technical Work Group (TWG) assignments
    - Agriculture, Forestry and Waste
    - Energy Supply
    - Residential, Commercial and Industrial
    - Transportation and Land Use
    - Cross Cutting Issues

Stepwise Planning Process:

- Organization
- Review and refine inventory and forecast of emissions
- Identify a full range of possible actions
- Identify initial priorities for analysis
- Develop straw policy design proposals
- Quantify initial GHG reductions and costs/savings
- Fully develop policy option templates

- Develop alternatives to address barriers as needed
- Aggregate and integrate results
- Finalize and report recommendations

Next Steps KCAPC, TWG's:

- KCAPC Develops and Approves Interim Report
- 2 TWG Meetings before next KCAPC Meeting
    - Identify Volunteer Drafting groups for each Selected Priority Policy Option for Further Analysis
    - TWG approves Draft Straw Policy Descriptions and Policy Designs for each Priority Option to KCAPC at Meeting #3

Key Elements of KCAPC Interim Report:

- KCAPC TWG's Background: Genesis, Mission, Members. Charges, etc.
- Highlights of KY GHG Inventory & Forecast
- Summary of Catalogs and Descriptions
- Summary of Selected Priority Policy Options
- Recap of Tasks Leading to KY Climate Action Plan
- Appendices

Timing – KCAPC Meetings

- January 28, 2010 – 1st KCAPC meeting
- March 22, 2010 – 2nd KCAPC meeting
- June 2, 2010 – 3rd KCAPC meeting
- August 4, 2010 – 4th KCAPC meeting and Interim Report
- Sept-Oct, 2010 – 5th KCAPC meeting
- November, 2010 – 6th KCAPC meeting
- December, 2010 – Final Report Due
- Between KCAPC Meetings – TWG conference calls and meetings

Lona Brewer, Program Manager of EEC, discussed the American Recovery & Reinvestment Act (ARRA).

Funds flowing through EEC:

- > $73 million
- DEP
    - DAQ – Clean Diesel Funds - $1,730,000 million
        - 23 school districts received funding - $1,495,918
        - 690 school busses retrofitted
        - 19 projects complete
        - Grant funds must be expended by September 2010

- DOW – Water Quality Planning - $503,800
  - 3 Projects
  - ORSANCO
    - Big Sandy River Basin Coordinator
    - Ohio River Regional Watershed Coordinator
    - Bluegrass PRIDE
    - Green Infrastructure Handbook for Municipalities
- DWM – Underground Storage Tank - $4,104,000
  - Funding personnel costs for 8 FFTL staff
    - Six positions to platform technical reviews of UST facilities in the permanent closure, site investigation and corrective action phases of the program
    - One position to perform reviews of reimbursement claims from the state fund
    - One to perform administrative tasks associated with file management.
    - Positions will be filled for approximately 3 years.
    - A portion of the funding reserved to accommodate abandoned site cleanup

➢ DEDI

- State Energy Program - $52, 533,000
  - Government Buildings
  - Schools
  - Industry
  - Farming
  - Homes
  - Smart Grid
- Energy Efficiency/Conservation - $10,427,000
  - >$6 million to cities & counties
  - KY Housing, Building, & Construction
    - Training & Inspections
  - Net Zero School Project – Warren County
- Appliance Rebate Program - $4,096,000
  - Kick off- April 22nd
  - 14 categories of appliances
  - >$3.4 million directly to Kentucky citizens
- Energy Assurance - $591,715
  - Facilitate the development of the Commonwealth Emergency Energy Assurance Plan
    - In conjunction with Kentucky Division of Emergency Management
    - Actions to be taken for emergencies resulting from both natural or human causes
    - Policies & procedures for assessing, tracking, mitigating, responding and rectifying existing or potential energy shortages

- Save Energy Now - $349,976
  - Based on an application submitted prior to ARRA
  - Partnership with UofL – Kentucky Pollution Prevention Center
  - Assist manufacturing & industrial plants in reducing energy consumption
- PSC
  - Energy Regulator's Assistance - $858,816
    - Increase the capacity of the PSC to manage an anticipated significant increase in regulatory activity from other energy related ARRA activities
    - 3 FFTL positions
    - Contracts with UK & UL – July 2010
      - Develop a Smart Grid Roadmap for Kentucky

Pete Goodmann presented the impacts of flooding on the state, in Sandy Gruzesky's absence, for the Division of Water.

- May 3, 2010, Governor Beshear submitted a request for a Presidential Declaration of Disaster to include all categories for Public and Individual Assistance for an initial set of counties.
- The request is for damages and impacts resulting from slow-moving frontal system which crossed the Commonwealth on May 2, 2010 causing severe weather outbreaks including high winds, tornadoes, and heavy rains which resulted on extensive river flooding and flash flooding, and local development of landslides.
- Storms crossed the Commonwealth in a wide northeasterly swath from Logan to Greenup Counties.

- River Basins that Experienced Significant Flooding

  - The Licking River
  - Stoner Creek (in Licking River basin)
  - The Cumberland River
  - Kentucky River
  - The Rolling Fork River
  - The Green River, including Barren and Rough rivers
  - The lower Ohio River

- FEMA DR 1912
  - Disaster declared by FEMA on 5/11/2010; result of severe storms, flooding, mudslides, and tornados
  - Individual Assistance counties: 61
    - Program may provide money and services to individuals in the declared disaster area when losses are not covered by insurance and property was damaged or destroyed.

- Public Assistance counties: 72
  - Program provides supplemental financial assistance to state, local governments and certain private non-profit organizations for response and recovery activities required as a result of a disaster. Provides assistance for debris removal, emergency protective measures, and permanent restoration of infrastructure.
- All counties eligible for the Hazard Mitigation Grant Program (HMGP); except for sanctioned counties and communities

Drinking Water:

- 46 public water systems issued a Boiled Water Advisory (BWA).
- KY had 300,000 people affected by flooding issues at public water systems with no water outages reported.

Wastewater:

- 86 systems reporting bypasses and overflows
- 19 systems total reported being flooded

Dam Failures:

- Dam failures are always a concern associated with major precipitation event .
- One partial dam failure
- Four other reports of issues that didn't amount to great concern.

DOW Programs to Address and Reduce Risks:

- National Flood Insurance Program (NFIP)
  - Enabling property owners in participating communities to purchase insurance protection against losses from flooding.
  - Participation is based on an agreement between local communities and the Federal government that states if a community will adopt and enforce a floodplain management ordinance to reduce future flood risks, the Federal government will make flood insurance available within the community as a financial protection against flood losses.
- Risk MAP (formerly Map Modernization) program
  - Acronym for Mapping, Assessment and Planning
  - Risk MAP efforts beginning in earnest in Federal FY 2010
  - Initial focus is to address gaps in flood hazard data to form a foundation for flood risk assessments and floodplain management
  - All new studies will be watershed-based and conducted on new or updated topography. LIDAR data is critical to this effort.

    - Ulitimate goal is to create sound risk data that will lead to hazard mitigation actions.
    - DOW
    - For FY 2010 the focus is the Upper Cumberland watershed and a proposed pilot in the Salt River watershed
- Dam Safety program
    - Permitting new dams
    - Inspecting and classifying dams
    - Ordering upgrades and maintenance of dams, as appropriate per inspections and hazard class
- State-Owned Dam Repair program
    - Taking a holistic approach
    - Optimizing funds by: Coordinating efforts with FEMA, KyEMA, NRCS, Risk MAP program
    - Mapping dam failure inundation zones
    - Managing risks:
        - Upgrading dams, spillways
        - Mitigating downstream effect
            - Moving people out or protecting with levees
            - Controlling inundation zones via easements
            - Developing Emergency Action Plans
- Stormwater Runoff programs
    - Improving runoff management (addressing quantity/rate issues also addresses water quality issues
    - MS4 program
    - Agriculture Water Quality Act and AWQ Plan
    - Construction Stormwater permits
    - Industrial and Stormwater runoff permits

Kentucky Status of Participation in the NFIP:

- Number of Participating Communities: 337
- Participating Inc Cities: 226
- Sanctioned Communities: 27
- Suspended Community: 1
- Insurance Policies: 23,032
- Total Coverage: $3,005,811,100
- Total Claims (since 1978): 18,805
- Total Paid (since 1978): $233,355,693

Rob Daniel spoke on behalf of Tony Hatton, Assistant Director of DWM, on Underground Storage Tank (UST) Program Status.

Program Areas:

- Operational Compliance – leak prevention – requirements for active UST systems
- Assessment and Cleanup – Permanent Closure, Site Investigation, Corrective Action
- Reimbursement – PSTEAF – financial assurance mechanism that provides for the reimbursement of corrective action costs to eligible tank owners.
- 49,398 registered UST's in Kentucky since inception of program in 1985, 37,780 UST's permanently closed, 12,390 NFA's issued, 11,623 active UST's at 3,846 facilities, 139 facilities are undergoing closure, 1,460 are undergoing site investigation, 377 are undergoing corrective action

Incentives for Regulation Development

- Time Consuming/Costly Cleanups
  - Some facilities have been in the cleanup process for more than 10 years
  - Streamline and expedite the assessment/site investigation phase to expedite actual cleanup
  - The use of "cookie cutter" standards and the lack of site-specific fate and transport evaluation cause unnecessary cleanups – assumes worst case across the board
  - Rely on conceptual site models as basis for remedial strategy development
  - A significant number of groundwater cleanups involve subsurface water that does not constitute "usable" water in terms of adequate yield
  - Differentiate between "usable" groundwater and incidental subsurface water
  - Concentrate technical staff towards true threats
- PSTEAF Efficiency
  - The 2006 "fixed cost" approach has improved the timeliness of reimbursement.
  - Simplify the reimbursement process outline in regulation – eliminate unnecessary "red tape".
  - Maintain and expand the fixed cost approach to minimize "Time and Materials" reimbursement.
  - Ensure that the process allows for accurate accounting to prevent expenditures beyond budgeted appropriations.
- Operational Compliance (Federal Energy Act UST Provisions)
  - Federal Energy Act UST Provisions must be adopted in KY for:
    - Owner/Operator Certification
    - Secondary Containment
    - Fuel Delivery Prohibition

- Currently, 42% of active UST facilities in KY meet the Federal SOC requirements
- Many owners of “mom & pop” facilities do not understand the requirements for their system
- Expansion of compliance assistance efforts underway.

Steps to implementation in progress:

- Development of an on-line education/testing program to comply with owner/operator certification.
- Include provisions that all new tank systems installed be secondarily contained (double-walled).
- Include provisions for the prohibition of delivery to systems that have failed to correct significant compliance violations.
- Increase the level of compliance assistance efforts through direct contact with tank owners regarding site-specific requirements.

UST Program Outreach

- UST Quarterly
  - New effort to establish a meaningful line of communication with tank owners and contractors
  - Published quarterly and covers all areas of the UST Program

- Contractor Resources
  - Component of Web site designed for the specific needs of UST Contractors
  - Additional mode of communication
- UST Branch Internal Policy Analyst, Virginia Lewis, coordinates outreach efforts.

Vapor Intrusion

Exposure from contaminated soil and groundwater can occur through the vapor phase – mostly in indoor air

The Division of Waste Management has established a Vapor Intrusion Workgoup to develop procedures to assess and abate impacts for multiple programs.

Sarah Gaddis has developed a comprehensive program to address these issues in Kentucky.

ARRA UST Grant – KY UST Program received a $4.1 million ARRA grant.

- Utilized for oversight of UST assessment and cleanup actions

- Eight Federally Funded Time Limited (FFTL) positions authorized to be filled
- Seven filled in January 2010
- Projected that the grant will fund the FFTL staff members for three to four years
- FFTL staff support is providing a significant benefit to the program in additional productivity

Chris Tyler, US Building Council, **Mark Ryles**, Facilities Management for the Kentucky Department of Education, **Martha Tarrant** of Ross-Tarrant Architects, and **Robert Rogers**, facilities representative for Warren County Schools, all made presentations on green buildings and schools.

- Green School – a school building or facility that creates a healthy environment that is conducive to learning while saving energy, resources, and money.

    - The average green building saves…
        - 30% energy
        - 35-50% CO2
        - 35-50% water use
        - 50-90% waste cost

    Energy and water costs go down while student health and test scores increases.

- LEED – Leadership in Energy and Environmental Design
    - A leading edge 4 level system for certifying the greenest performing buildings in the world.

Impact of Buildings in the U.S.

- Environment
    - 38% of all CO emissions
    - 40% of raw material use
    - 30% of waste output
    - 14% of water consumption

- Energy Use & Operating Cost
    - 72% of all electricity consumed
    - Second largest operating expense for schools

- Impact of Buildings
    - Green Schools
        - 30% less water
        - 38.5% less asthma

        - 20-26% better performance in math and reading
        - Student attendance increases
        - Teacher attendance increases
        - 33% less energy – saving $40,000 annually per school

- High Performance School Goals
    - Energy Efficient
        - High efficiency systems
        - Well insulated exterior
        - Utilize commissioning
          Operate for conservation

    - Cost effective
        - Energy cost savings
        - Water use savings
        - Maintenance savings

    - Healthier & More Productive
        - Indoor air quality
        - Environmental comfort
        - Daylighting
        - Acoustics

    - Environmental Stewardship
        - Less construction waste
        - Less raw materials, more recycled
        - Decreased stormwater run off

    - Obstacles
        - Lack of knowledge
        - Cost concerns
        - Inability to measure benefits

    - Changing Attitudes
        - Increased awareness
        - More ENERGY STAR schools
            - 59 in Kentucky today
            - Only 12 in 2008

    - Senate Bill 132
        - Set green school construction guidelines
        - Consider life cycle cost
        - Plan for energy efficiency / net zero
        - Green construction trust fund
        - Staff training
        - Administrator, faculty, and student training

        - Curriculum

    - Additional Considerations
        - Change culture
        - Raise minimum code requirements
        - Set target energy usage goals
        - Encourage incentives
        - Commission new building/re-commission existing buildings
        - Provide centralized resources

In referencing HB 2 all school districts will become a part of the KEEP's program.

SB132 provides the standard for design and construction for modification.

Warren County Public Schools Energy Saving Construction Initiatives

Site

- South facing façade

Architectural / Structural

- Low-E windows
- ICF Construction
- 6" polyiso insulation at roof
- Icinene foam insulation in stud walls/eaves
- Low roof structure
- White roof color
- Wax free floors

Mechanical

- Geothermal HVAC/decentralized pumping
- HVAC Service closets
- UV lamps in HVAC
- Aircuity (CO2 monitoring)
- Multi stage / multi compressor HVAC units
- DDC controls
- Off site HVAC monitoring / scheduling
- Domestic hot water via geothermal heat pump

Plumbing

- Low flow fixtures

- Auto flush valves / batter powered
- PV powered wash fountains
- Automatic faucets / battery powered
- Tankless water heaters
- Developed domestic water well (for athletic fields)

Electrical

- T-5 high bay florescent fixtures in gymnasium
- T-8 florescent lighting in classrooms
- Motion switching on all lights
- Surge suppression / power conditioning
- Daylighting (solar tubes, light shelves, automatic switching)
- LED parking lot lights
- Energy star appliances

June 4, 2010

John Voyles, E.O.N. US, VP discussed Kentucky's carbon footprint and where it leads.

Tough issues, tough solutions

- Renewable Energy
- Transmission Grid
- Carbon Legislation or EPA Regulation
- Efficient Use of Electricity

You can reduce the impact of emissions by joining the Demand Conservation program, which helps you reduce the need for generating electricity at peak times. (www.eon-us.com)

Past successes, future challenges

- CO2 emissions is a 100 times larger issue than SO2/NOx
- 95% of electricity comes from coal-fired power plants.
- Renewable Portfolio Standards (RPS) should be considered in the context of national or regional greenhouse restrictions.

Considerations – hydro

- Annual availability equivalent up to 40% of continuous maximum capability
- Many legal/regulatory entities involved with different missions – recreation, transportation, nature preserves
- Low operating cost – "no fuel"
- Most hydro locations are already being used

Considerations – wind, solar, and geothermal

Considerations – biomass

Governor's Biomass Task Force

- Meet RPS requirements with "in state" resources
- Co-fire biomass with coal
- 15 million tons of biomass combustion for 12% RPS
- Supply infrastructure and sustainability

The Nuclear option

- Zero-carbon option
- Enormous investment of time and money
- Critical that there be a strong public and political consensus
- Disposal still an issue
- Nuclear is a potential long-term solution for Kentucky

Considerations – coal

- One of the most widely-used fuels for electrical generation – 90% availability
- 50% of U.S. power produced today
- 95% of KY powered produced today
- One of the largest fixed-source producers of CO2
- Relatively low transportation costs (river barge)

Carbon capture: What's involved…

- 3 technology paths for capture –
  - post-combustion,
  - pre-combustion,
  - oxy-fuel combustion

- Promising options, but no large-scale commercial application yet
- E.ON U.S. involved in post and pre-combustion R&D

Carbon capture & sequestration – What's involved…

- "Bury" the problem
- Deep underground wells – depleted oil fields
- Significant investments in new technology, pumping systems
- Promising option, but no large-scale commercial application yet

- "NUMBY"

"Costs" of transmission…

- Current grid is stretched – would require major new construction at large capital cost
- Risks of over-reliance on single highway (Canadian blackout)
- Development/approval time
- NIMBY

Carbon legislation or EPA regulation

Carefully crafted, comprehensive legislation is a more effective option for controlling greenhouse gas emissions than piece-meal EPA regulation.

Legislation should:

- Cover economy-wide entities
- Provide larger initial allowance allocations and longer phase-out period to ease transition
- Begin with an effective safety valve allowance price

EPA regulation via the Clean Air Act would:

- Utilize low threshold levels for applicable entities
- Establish a significant number of non-attainment areas
- Regulate an extremely high-volume pollutant with no commercial technology control available

American Clean Energy and Security Act of 2009

- Passed House on June 26, 2009
- Mandates a 17% reduction in greenhouse gases by 2020 and 83% by 2050 from 2005 levels
- Senate did not advance similar bill
- Current form contains elements that are in the right direction
- Copenhagen commitments were based on the House bill targets

To further mitigate costs to our customers, additional elements E.ON U.S. would like to see included in the bill are:

- Modified near- and mid-term greenhouse gas reduction targets and timetables
- Inclusion of the price "ceiling" on emission allowance costs
- Extension of the phase-out period for allocation of allowances

- Preempt inappropriate EPA regulations under the CAA

Reducing demand – the challenge

- 15+% reduction in demand
- Unprecedented consumer commitment to energy efficiency
- Commitment to “smart grid”
- Less coal in total generation mix, less exposure to carbon tax, but high cost of purchased or developed renewable power sources

Energy Efficiency Initiatives

- E.ON U.S. is investing more than $25 million in energy efficiency programs annually – at least $182 million over the life of the program
    - Examples:
        - Enhanced energy audits
        - Commercial rebates
        - Residential lighting

- Expected to reduce the need for additional generation by more than 500 megawatts
- Conserve Energy During Heavy Demand
    - Load control program: partnership with customers that allows us to cycle off AC units during peak demand
    - Smart meter pilot program: helps customers manage their usage

Next Steps

- Understand that rising energy costs will be a way of life for years to come – consider everything you do with that in mind
- Make major, sustained commitment to energy efficiency
- E.ON U.S. – to address issues of carbon capture and sequestration with help of policy makers
- E.ON U.S. – share information and work constructively with policy-makers

Balance Outcome

- Insist on a through evaluation of cost
- Allow technology to catch up
- Demand an equitable allocation of carbon credits
- Be efficient – seek incentives for efficiencies

EQC BUSINESS:

Meeting dates for the upcoming fiscal year: (subject to change)

- October 21, 2010 (Governor's Conference)
- December 2, 2010
- February 3, 2011
- March 24, 2011
- April 15, 2011 (Earth Day Awards Ceremony)
- June 2-3, 2011 (Annual Meeting)

Activities Discussed:

- Acknowledgement of DNR's EQC recommendations
- Develop a date retrieval system
- GIS Letter to be completed and forwarded to the Governor, Secretary of Finance and EEC
- State of the Environment revisions
- Become a part of regulation development
- Letter of acknowledgement of Budget constraints in regards to statutory responsibility
- Review significant EPA changes that affect state regulatory rules
- Follow up with the Climate Action Council
- How can State help City's more
- Letter to Secretary of Finance regarding progress on State Green Building Standards
- Recycling
- Sustainable Farming
- Proposed website addition using the EPA site as a template for regulations
- Letters to all the presenters, (Scott). I usually send out thanks to everyone who participates on any of our program. A formal thanks from Scott is more appropriate.

MOTIONS:

A motion was made by Commissioner Knoth to open the floor for new chairs of the Commission. Knoth motioned to accept the status quo, or the same chairs. The motion was seconded by Commissioner Zick and passed unanimously.

A motion was made by Commissioner Holmes to accept and approve the GIS letter to send to the Secretary and the Governor. The motion was seconded by Commissioner McSpirit. Discussion was made to take out the footer. The motion was passed unanimously.

A motion was made by Commissioner Garner to approve all SOC's. The motion was seconded by Commissioner Knoth. Commissioner Holmes did not vote, and the motion was passed.

With no further business, Commissioner McSpirit moved to adjourn the meeting and Commissioner Knoth seconded. The meeting was adjourned at 11:54 a.m.

Signed,

Scott Smith, EQC Chair
October 21, 2010