



2005 ECC Membership

Wayne Evelo, Chair

Frank Burcham
 Bill Gross
 Dave Melton
 Mike Minturn
 Ronald Rioux

Pending:
 Ken Maestas
 Suzanne Probart

SUMMER EDITION Two Thousand and Five



Wayne Evelo
 ECC Chair

H I G H L I G H T S	
A New ECC Chair	Energy on TV
Evaporative Cooling	Clean Cities News

Chairman's Message

This next year is going to be as outstanding as the last two! The last two years of hard work are paying off. The original projects are being implemented and are generating substantial benefits. The next bond cycle is this year, which will fund another round of energy efficiency projects.

The Mayor and City Councilors should be commended for their foresight in creating the 1% for energy ordinance. The city of Albuquerque is setting a tremendous example for the rest of the country, by committing to a sustained program of energy efficiency implementation.

The first bond cycle generated approximately \$1.2M for energy savings projects, which the city has turned into \$600K of savings every year for the foreseeable future. The implementation of these energy savings projects will pay for themselves very quickly and they will continue to save money.

- Continued p.3 Chairman's Message

APS is Moving to Renewable Energy Education

With support from the Governor's Office and the help of the state's Energy, Minerals and Natural Resources Department, a program called "Schools with Sol" is putting renewable energy to work in Albuquerque Public Schools and in schools around the state. They are truly providing a "Hands on Learning Tool." With the help of Sacred Power, the state is

Meetings & Events

JULY 21

PNM Energy Academy

Sheritan Uptown

8:30 am – 4:30 pm

*Mark Your Calendars
 For the next Energy Academy in the
2005 series*

September 1

ECC Open Meeting

JULY 20

**8 a.m. -10 a.m.,
 4th Street**

Please contact
 Connie Tachias at
 (505) 768-5345,
Ctachias@cabq.gov

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ECC Advisory Committee:

Richard Harding, Don Maez, Lynn Behnfield-Thomas, Jim Palmer

providing operational solar PV, hot water, and heating systems that are tied directly into the school's systems. This is also accomplished with support from PNM. Teachers and students alike can see and understand the systems' efficiency verses using natural resources, and can monitor the performance of these solar systems. This, in conjunction with the state's newly added educational standards science focusing on energy/conservation education, combines knowledge and application for effective student comprehension.

The state's program has provided over thirty educational solar systems around the state in the last three years. APS has received five solar PV systems under the state's Schools with Sol program. This also supports the school districts to efforts to conserve our natural resources through education and behavior.



Here, teachers are attending an APS, PNM, NREL teacher workshop. Twenty-three teachers built wind generators which they can use to develop theory and reality lessons for their students.

In a related program, the APS Energy Conservation Program, Energy S.T.A.R.S. (School Teaching About Resource Savings) is still going strong. This effort ties the new state educational standards by involving school administrators, teachers, students, and custodial teams to focus on energy conservation. In return for the school's efforts to conserve, schools in the program receive a fair portion of their savings back into the school's operational budget.

All the funds for the program are from savings on utility costs. To date, the district has fifty schools enrolled in this voluntary program, and in the past three and a half years, the schools have saved over 1 million dollars.

Chairman's Message Continued...

The money saved can be used to fund other critical activities for the city's residence. The efficient use of funds means the city can accomplish more with the same funding. This will also mean collateral benefits of over 3 million gallons of water saved, 3.4 million pounds of coal not burned, and a cleaner and safer city.

"A cleaner and safer city?" you ask. The ECC was able to support the purchases of low emission, hybrid vehicles, bio-fuels, and waste to energy systems resulting in a cleaner city. Furthermore, the implementation of Light Emitting Diodes (LED) traffic lights results in brighter lights that are easier to see and less burned out traffic lights. This results in safer intersections and fewer traffic accidents. The life saved could be yours.

CLEAN CITIES NEWS

The Land of Enchantment Clean Cities Coalition (LOECC) has recently expanded its stakeholder membership to include all of New Mexico.

A direct mailing campaign is underway to solicit membership and funding together with stakeholder commitments throughout the state.

The LOECC is required by the US DOE to re-designate itself every 5 years by asking members for reaffirmation of the expanded use of clean, alternative transportation fuels.

The Coalition will formally renew its commitments to improve air quality, economic growth, and energy security by facilitating the development and use of alternative fuel vehicles and alternative fuel infrastructure throughout NM.

The required re-designation activity will be accomplished in September of 2005.

The Energy Conservation Council's vision for the next year includes the following:

- Educate local community on the successes generated by the Mayor and City Council's implementation of the 1% for energy ordinance, which created the ECC.
- Refine the Project Selection Criteria, based on lessons learned from the first round.
- Generate a prioritized list of potential projects.
- Replace the departing Board members (thanks again to Don Maez and Jean Ayra) with members of the same high caliber.
- Create an Advisory Board to develop a pool of outstanding expertise to assist the Board during the year and replace the experts, which will inevitably leave.
- Create a Vision/Mission statement to guide ECC.
- Support Albuquerque as it becomes the Solar City.
- Keep Albuquerque a great place to live.

It is going to be another exciting year! - Wayne Evelo, ECC Chair

Evaporative Cooling: The Benefits

The book, *Evaporative Cooling Guidelines Manual for New Mexico Schools and Commercial Buildings*, as well as other sources, state that refrigerated cooling systems uses a comparable amount of water in the generation and delivery of the additional electricity they require over evaporative air coolers (EAC). EAC's use approximately one-fifth or twenty percent of the energy as refrigerated air systems for a comparable cooling effect. The low wet-bulb temperatures in NM are a "natural resource," like oil, silver or tourism that our residents can use to save money on their cooling bills. Unlike refrigerated systems, EAC's are simple devices that most homeowners can repair themselves.

In addition to significantly larger electric bills, there are also hidden costs for converting from EAC to refrigerated cooling such as: installing bigger wires to the equipment; possible electrical code upgrades; fabrication and installation of properly sized supply and return air ductwork and air registers.

EAC's use water in two ways: first, for the cooling effect where the water usage is proportional to the fan speed and the air humidity ratio, and second, for keeping the evaporative media from clogging with mineral buildup. I recommend that most EAC's using the thin-pad aspen media use no bleed at all. EAC water saving devices like intermittently energized sump pumps (sump-dump-pumps) which are now readily available, should be promoted for EAC's which require bleed-offs due to very hard water or expensive rigid media. These can reduce the EAC water usage 40-60%.

- Jim Palmer
NRG Engineering/TVP

"ENERGY MATTERS"

Cable channel 16 provides energy awareness and educational outreach. All shows are available on DVD. For GOV16 scheduling times, visit www.cabq.gov/govtv/

Call Energy Management at 768-5345 to place an order for a DVD.

PSA for CLEAN AIR

A public service announcement ran from 6/25 through 6/30 on KOAT-TV Channel 7 to increase public awareness regarding E-85 and flexible fuel vehicles.

This was the narration:
"Do you wish there were more you could do about cleaner air? Well. You can if you're driving one of the twenty-two thousand flexible fuel vehicles on NM roads. They're designed to run on either regular gasoline or a new clean burning fuel called E-85. E-85 is a blend of 85% ethanol and 15% gasoline. Using E-85 will help keep NM skies blue. This msg. brought to you by NM Energy, Minerals and Natural Resources Department.



Based on requests from our readership, ECC will provide useful definitions from the International Energy Conservation Code Book via this newsletter. This edition will cover selected general definitions beginning with the letter H.

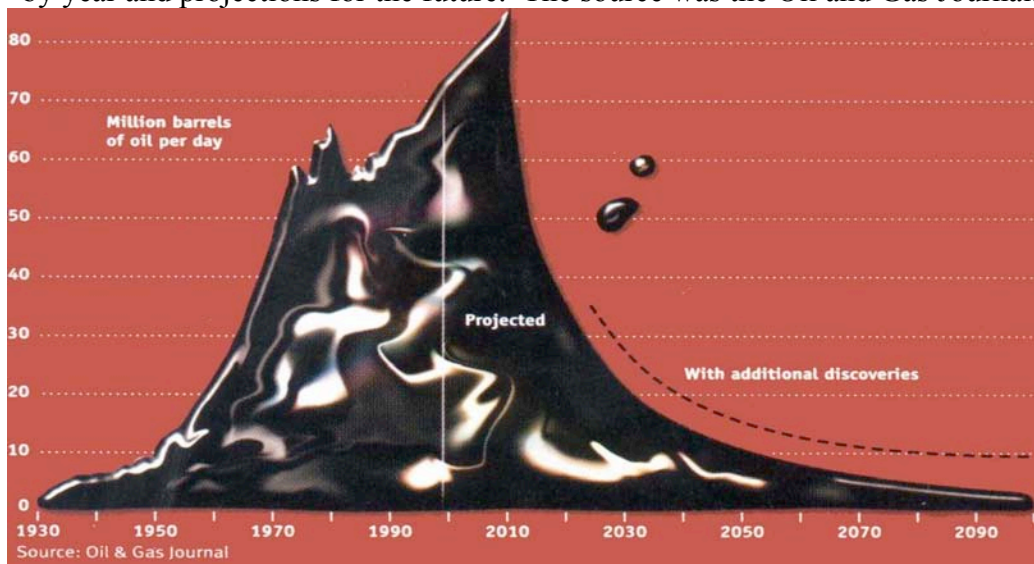
Heat Capacity (HC) – The amount of heat necessary to raise the temperature of a given mass by one degree. The heat capacity of a building element is the sum of the heat capacities of each of its components.

Heat Pump– A refrigeration system that extracts heat from one substance and transfers it to another portion of the same substance. It may also transfer it to a second substance at a higher temperature for a beneficial purpose.

Heat Rejection Equipment- Equipment used in comfort cooling systems such as air-cooled condensers, open cooling towers, closed-circuit cooling towers and evaporative condensers.

Heat Trap – An arrangement of piping and fittings, such as elbows, or commercially available heat trap, that prevents thermosyphoning of hot water during standby periods.

Something to ponder: This chart shows the millions of barrels of oil per day by year and projections for the future. The source was the Oil and Gas Journal.



*Laurie Roach creates the “Energy Conservation Council” Newsletter.
Your ideas, comments, articles, or notices of upcoming events are welcome.
Please call or email for parameters and deadlines: LREvents@aol.com, (505) 332-0428.*

To add a colleague to the distribution or to UNSUBSCRIBE, please reply to sender
The ECC has open meetings on the third Wednesday of each month.