The "GREEN" Issue

Land, Wind, and Sun: The Future of Energy in Arizona
Saturday, October 10, 2009, 9:30 to 11:30 AM
Las Fuentes Resort Village, 1035 Scott Drive, Prescott, AZ

PANELISTS WILL INCLUDE:

- Teri Rami - Bureau of Land Management (BLM), Jen Bradford - Iberdrola Renewables (Builder of the Dry Lake Wind Project)

Topics:

- Projects being developed
- Goals for renewable energy
- Reported “slowdown” in renewable energy
- Concerns about the use of large amounts of water by certain types of solar projects
- Concerns about the impact of wind and solar projects on the recreational and aesthetic values of public land
- Perceived need for a coordinated approach to our energy future by all involved agencies

How Arizona measures up to other states and other countries in renewable energy planning, investment, and implementation

Bring your Questions!
The President’s Message

Our October meeting will involve all of us in Arizona’s future: **Land, Wind, and Sun: The Future of Energy in Arizona.** We will meet Saturday, October 10, 2009, 9:30 to 11:30 AM, at Las Fuentes. Norman Perry has provided several thought provoking articles concerning energy for this newsletter.

November’s League meeting will center on information about changes in America’s Health Care System. LWVAZ recently completed a 66 page report titled “**Health Care Issues Behind Health Care Reform,**” which was emailed to you on August 2. For budgetary reasons, the state LWV was unable to have the report printed and mailed out; use of emails to share information is the future of our organization as well as of many others. This does require some homework!! Please call it up, download it, and set aside time to read it. If you can’t find it in your past emails, let me know, and I’ll send it out again.

Also – please send any changes in your email address to us as soon as possible. Only our newsletter, THE VOTER, is snail mailed to members without email addresses. Other publications are available by using computers at the libraries, and are posted on our local, state, and national LWV websites.

Prescott Leaguers will soon be receiving their mail-in ballots for the November 3 election. They will be voting for three members of the City Council and on Proposition 401, “The Taxpayer Protection Initiative”.

The League sponsored a candidate forum for Prescott Mayor and City Council Candidates prior to the Primary Election at the end of July at the Yavapai College Performance Hall. This was the best attended of the candidate forums, attracting more than 500 potential voters.

The League does **not** take a position on **The Taxpayer Protection Initiative**, but asked **PRO and CON** spokesmen to give 300 word statements on the measure. **PRO spokesman** Brad DeVries brings a background in environmental organizations including Prescott Alternative Transportation, Prescott Creeks, American Rivers, Sustainable Agriculture Coalition, and Defenders of Wildlife. **CON spokesman** David Maurer is now in his 25th year of Chamber of Commerce management in Prescott, Flagstaff, and Phoenix, and has served on community boards including United Way, Prescott Area Leadership, the Arizona Community Foundation, and is the current president of Prescott Frontier Rotary.

Their statements are printed in this VOTER, as well as the full wording of the initiative. In getting the issue on the ballot, disparities in governing law concerning the number of petition signatures required to qualify the measure were exposed, and will likely be brought to the legislature in the next session.

A hard working committee has revamped our Membership Handbook, which will be handed out at the upcoming meeting to paid members of the League. The Directory portion will be printed separately as an insert to the Handbook, and will be easily updated. **It’s not too late to pay your dues to be included!**

See you at the October meeting!
Nancy Shugrue, President LWVCYC
In the Mojave Desert, close to Las Vegas, a company named Nevada Solar One uses 250 acres of parabolic trough solar panels. They heat oil that runs through the panels, up to 750 degrees. From there it turns water to steam, that turns the turbines, and then pushes up to 64 megawatts onto the grid, enough to run 14,000 households. Nevada Solar One came on line in 2007, the first solar plant to be built in the US for 17 years. It is a Spanish owned company, and the mirrors were made in Germany. Nevada Solar One can convert 21% of the sun’s rays into electricity. A gas plant is more efficient, but the sun’s energy is free and does not emit planet-warming carbon dioxide.

The total power needs of humans on Earth by 2020 are expected to grow to 20 terawatts. (A terawatt is a trillion watts.) sunshine on the solid parts of the Earth (not oceans, etc.) is 120,000 terawatts, more than enough. There are two main ways of harvesting solar power. The first is to produce steam, either with parabolic troughs or with a field of flat, computer-guided mirrors, called heliostats, which force sunlight on to a receiver on top of a “power tower.” The second way is to convert sunlight directly into electricity with photovoltaic (PV) panels. Steam generation is currently more efficient than photovoltaic – a greater percentage of incoming sunlight is converted into electricity. But it requires acres of land and long transmission lines to bring power to where the power is needed.

Solar energy is more expensive than gas or coal. More than two dozen states have now made stipulations for “renewable portfolio standards” (the amount of power that must be produced from renewable energy) ranging from 15% to 25% (15% for APS), and Congress is debating instituting this concept throughout the U.S. Currently, solar energy is only marginally competitive because of incentives such as a 30 percent federal tax credit to offset construction costs.

In Arizona, the Solana Generating Station will use molten salt for storage. When the station goes on line in 2012, three square miles of parabolic troughs will produce 280 megawatts for Phoenix and Tucson. Solana is being built by Abengoa Solar, a Spanish company, which might indicate just how far the U.S. is behind in this technology. In the 1980’s, Roland Hulstrom calculated that photovoltaic panels covering 100 miles by 100 miles could electrify the entire country. This 100 by 100 square miles could easily be accommodated on roofs of homes, commercial and industrial buildings, car park cover, stadiums, schools, etc.

PV panels only provide an efficiency of about 10% to 20% compared to 24% for parabolic troughs, but they use little water. When the Iranian oil scare faded in the 80’s so did government enthusiasm for renewable energy, and many of the best engineers migrated to the computer industry that was using the same raw material—silicon and other semiconductors. In the current market, the government is interested once again, and some of the engineering talent has moved back to solar.

In 2008, a PV panel was built that is 40.8 percent efficient, a world record, since broken. Thin-film semiconductors generate less power per inch, but require fewer raw materials, which makes them more economical to use on large PV installations. This improved process can produce power at around one dollar per watt, which is very close to the current lower cost of using fossil fuels.

In 2007, SunPower built a photovoltaic system consisting of 72,000 plus panels in 26 weeks. The system generates 14.2 megawatts, the largest PV installation in the U.S. Germany has encouraged the use of photovoltaic panels by guaranteeing a return of 8% each year for 20 years on the cost of your PV solar panels, whether you are a company, municipality or home owner.
On June 16th 2009, the Arizona BLM Solar Energy Team issued a list of applicants for the use of BLM Public Lands for solar energy production only. The following data and statistics relate to these applications that might be of interest to members of EDC.

1. As of June 2009, the Arizona BLM had received applications for the use of 709,488 acres of Public Lands in Arizona for the production of solar energy. The acres requested per MW varied widely between applicants. These acres and megawatts do not include any wind generated energy.

2. The applicants estimate that their energy production on these Public Lands will be 35,433 megawatts.

3. 34,433 megawatts are planned to use parabolic trough technology. (This system collects sun light and directs it to a tower that concentrates the light onto a turbine that produces electricity.

4. Arizona uses between 7 and 8 gigawatts of electricity a year; this is expected to double by 2025 to 13 to 15 gigawatts. This number does not take into account any energy increase that might be occasioned by vehicles that depend on electricity.

5. Arizona has a population of 6 + million and is expected to double by 2025.

6. A MEGAWATT (MW) is equal to 1 million watts.

7. A GIGAWATT (GW) is equal to 1 billion watts or 1,000 MEGAWATTS.

8. The BLM – Washington D.C. office (BLM Acting Deputy Director) wrote on June 25th, 2009 that each megawatt of “standard wet ‘parabolic’ trough” production capacity will require 13 acre feet of water per annum or 4,200,000 gallons a year. If the applicants use the ‘parabolic trough, wet’ technology as currently shown on their applications, then the water consumption is calculated to be approximately 144 billion gallons per year.

9. Arizona’s estimated 6 million households will use an estimated 2 trillion gallons of water in 2025. Note: The average household uses 0.25 acre feet of water per year. An acre foot of water is equal to 325,800 gallons. Therefore the average household uses approx. 81,000 gallons of water per year or 225 gallons per day.

10. There is an alternative ‘dry’ parabolic trough technology that could cut the water consumption down by 90% to approximately 14 billion gallons per year, but this process is more expensive than the ‘wet’ parabolic trough system.

11. Both the parabolic trough and photovoltaic processes will require that the areas be fenced off from any other uses (up to 709,488 acres of Arizona public lands). Wind farms can still allow wildlife and cattle to graze below the turbines.

12. Arizona supply companies, such as Arizona Public Service and Salt River Project, were authorized by Executive Order in December 2008 to apply for the use of Public Lands for the generation of renewable energy. No Arizona energy supply company has applied for the use of Arizona Public Lands for this purpose. This might be something that individuals might discuss with their Arizona Corporation Commission representatives.
In Arizona almost everybody is very interested in water, how it is used, where it comes from, who owns it etc.

A recent study was completed related to the water that we, as individuals, consume in the products we use. Below is a list of items and the amount of water that is used until the product arrives in your hands:

<table>
<thead>
<tr>
<th>Item</th>
<th>Water Used (gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microchip</td>
<td>8</td>
</tr>
<tr>
<td>Pint of Beer</td>
<td>20</td>
</tr>
<tr>
<td>16 oz. Diet Coke</td>
<td>3</td>
</tr>
<tr>
<td>7 oz orange juice</td>
<td>45</td>
</tr>
<tr>
<td>1 lb chicken</td>
<td>467</td>
</tr>
<tr>
<td>Hamburger</td>
<td>634</td>
</tr>
<tr>
<td>Ream of white paper</td>
<td>1,321</td>
</tr>
<tr>
<td>Pair of leather shoes</td>
<td>2,115</td>
</tr>
<tr>
<td>Midsize car</td>
<td>39,090</td>
</tr>
<tr>
<td>Apple</td>
<td>18</td>
</tr>
<tr>
<td>4 oz. wine</td>
<td>32</td>
</tr>
<tr>
<td>4 oz coffee</td>
<td>37</td>
</tr>
<tr>
<td>Diaper</td>
<td>214</td>
</tr>
<tr>
<td>1 lb cheese</td>
<td>599</td>
</tr>
<tr>
<td>Cotton T-shirt</td>
<td>719</td>
</tr>
<tr>
<td>1 lb beef</td>
<td>1,857</td>
</tr>
<tr>
<td>Pair of jeans</td>
<td>2,866</td>
</tr>
</tbody>
</table>

The average person in the developed world drinks a gallon of water each day but “eats” another 800 gallons. The developed world uses four times more water per person than the rest of the world.

Guess how much water it takes to grow one almond, a cantaloupe, or a pound of tomato paste? It takes 1 gallon, 25 gallons, and 55 gallons respectively.

Many thanks to Norman Perry for these articles.
Q: When can a Voter Registered as an Independent Vote?

At September’s LWV meeting, Nadine Basha brought up the point that voters registered as Independents were sometimes confused about when they could or could not vote. Lynn Constabile, Yavapai County’s Elections Directors, supplied the following answer:

A: In Arizona, Independents, No Party Preference and Non-Recognized Party Members are eligible to vote in every election except for the Presidential Preference Election (PPE).

The PPE election has been reserved by state law to be an election just for the qualifying recognized parties that chose to participate. This election is usually held in February of a Presidential Election year.

Prescott Voters will elect 3 City Council members, and vote on “The Taxpayer Protection Initiative”

The League, in its commitment to voter education, has provided space for PRO and CON statements concerning the upcoming voter initiative, but does not support or oppose the initiative or attest to the accuracy of the statements made in these articles.

Pro and Con on Proposition 401
“The Taxpayer Protection Initiative”

Official Ballot Summary:
The Taxpayer Protection Initiative will change the Prescott City Charter to require a vote of the public for most City projects with a value of $40,000,000 or more, to be adjusted by inflation. A public vote on each applicable project will prevent the City from imposing very large financial obligations on the public without citizen oversight and approval.
Taxpayer Protection Initiative

This is a citizen originated initiative that will amend the Prescott City Charter. Its purpose is to require voter approval for certain high-value projects.

A. Definitions:
1. “City” is defined as the City of Prescott, Arizona.
2. "Project" is defined as a group of related activities undertaken for the purpose of performing a discrete function or set of functions or creating interrelated infrastructure, including but not limited to:
   a. The acquisition of land and the design and construction of transportation infrastructure;
   b. The acquisition of land and the design and construction of infrastructure to accomplish withdrawal and transportation of water from a remote location;
   c. The transfer or sale of assets; or
   d. The design and construction of a single physical facility or complex.
3. “Project Value” is defined as the City’s share of past and estimated future expenditures, obligations, or conveyances related to said Project, regardless of when or how the expenditures, obligations or conveyances are allocated in the budget process of the City, or in any related contract or agreement, if a vote of the City Council will be required to continue the City’s participation in the Project. Estimated future expenditures, obligations or conveyances shall include an allowance for possible cost over runs. The Project Value shall be calculated with respect to the total combined values of all portions or subcontracts of said Project and shall include the operating costs for the first five years of the Project and all planning and study costs for the project. For expenditures financed using borrowed funds, Project Value includes the greater of either total expenditures of borrowed funds or total amount borrowed, and will not include interest payments.

B. Applicability:
1. The City may not, without prior voter approval through a Proposition as described herein, enter into one or more agreements or contracts relating to a single Project that:
   a. Authorizes expenditures of City funds; or
   b. Imposes direct or contingent obligations on the City or its residents, including long term contractual payment obligations or guarantees of future payments; or
   c. Conveys ownership or control of property or resources owned or controlled by the City, including any resource rights owned or assigned to the City but transported, sold or used by another party; or
   d. Conveys rights to use property or resources owned or controlled by the City or to be a provider of any category of services currently provided by the City; and that, when combined with any previously authorized expenditures, obligations or conveyances related to the same project, would have an aggregate Project Value of Forty Million Dollars ($40,000,000) or greater. Beginning in 2011, the value threshold will be adjusted once every year by the percentage change in the Bureau of Labor Statistics Consumer Price Index for All Urban Workers during the immediately preceding calendar year.
2. Approval by the voters shall be required irrespective of whether funds have been spent on a Project before passage of this initiative. If a future council vote is required to facilitate any furtherance of a Project, authorize participation by other parties in such a Project, or authorize City participation, then the voter approval requirements of this initiative apply.

3. Approval by the voters shall be required if at any time the Project Value reaches the value threshold in Section B.1. Where the Project Value is initially determined to be less than the threshold amount in Section B.1., the City may conduct a Proposition in accordance with this initiative to ensure that the requirement of this Section does not result in the need for a Proposition at a later date.

C. Exceptions:

1. In order to assure the Health and Safety of the City’s residents, the following Projects shall not require a public vote:
   a. Replacement or repair of existing sewer and water lines, or
   b. Replacement or repair of wastewater treatment systems, or
   c. Projects mandated by state or federal law or court order.

2. Approval by the voters shall not be required for initial funding of feasibility studies or conceptual designs, or other expenses in aggregate less than Five Million Dollars ($5 million). Design plans and specifications or construction of any kind shall not be included in this exception. This amount shall be adjusted annually by the same percentage rate as the threshold is adjusted in Section B.1.

D. Proposition Content:

1. The wording of the mandated Proposition, seeking voter approval for a Project, shall include at minimum the following:
   a. Description of the Project;
   b. Estimated total amount of payments or guarantees to be made by the City, entities controlled by the City, City residents, or ratepayers; and estimated amount per household;
   c. The Project Value, and enumeration of all projected financing costs including interest; and estimated specific costs, including, but not limited to, likely and potential legal, litigation, or remedial costs;
   d. Detailed description of the City’s possible funding mechanisms and repayment methods with each mechanism’s estimated share of total funding, or declaration that the specific funding and repayment sources are not determined; and
   e. Specific location(s) of the subject Project.

2. There shall be printed on the official ballot immediately below the number of the measure and the official title of each measure:
   A "yes" vote shall have the effect of ______________________.
   A "no" vote shall have the effect of ______________________.
   The blank spaces shall be filled with a brief phrase, approved by the City Attorney, stating the essential changes depending on the outcome of the vote including the estimated per household cost of the Project.
E. Voter Information:
1. Prior to the Proposition vote on a proposed Project, all households with a registered voter will receive an election pamphlet containing the five points in Section D.1. In addition, ballot statements both pro and con shall be published in the pamphlet. Individuals or organizations may submit statements of up to 300 words at a cost of One Hundred Dollars ($100) per statement, up until a date specified by the City Clerk. The statements shall also be posted on the City’s web site, with a link from the home page. The City shall mail one copy of the publicity pamphlet to every household that contains a registered voter. This pamphlet may be combined with another voter pamphlet covering other ballot questions. The mailings may be made over a period of days but shall be mailed in order to be delivered to households before the earliest date for receipt by registered voters of any requested early ballots for the Proposition vote.
2. Prior to the Proposition vote, the City shall hold or cause to be held at minimum two public hearings on the ballot measure. The hearings shall provide an opportunity for proponents, opponents and the general public to provide testimony and request information.

F. Sponsoring Campaign Committee:
The sponsoring campaign committee of this initiative, the Taxpayer Protection Committee, shall have standing in all legal actions related to the initiative and future implementation of any section of this initiative.

G. Severability:
If any provision of this initiative is found to be unenforceable by a court of law, the remainder of the initiative shall remain in effect.

PRO:
Written by Brad DeVries, chair of the Taxpayer Protection Committee. Marketing Specialist, Community Events at Yavapai College Performance Hall, Partner, the Rio Alta Group: P.R., Advertising, Opinion Research; Secretary Prescott Alternative Transportation, former Outreach Coordinator at Prescott Creeks, former National Media Director at American Rivers.

Major projects can change the character of Prescott, for better or worse. This initiative gives you a direct voice in such decisions.

This initiative will require the City of Prescott to get voter approval on projects or transfers of assets of $40 million dollars or more. That’s a lot of your money, about $1,000 per person or $2,500 per household. This initiative gives you a say in how such huge amounts are spent. The fact is, you used to have a vote on such projects, because they required voter-approved bonds. Now cities, including Prescott, are using loopholes that let them borrow huge sums without public input.

No level of our government operates without checks and balances by different branches – with the glaring exception of municipal government. The Arizona Constitution requires a vote on new taxes and debt as the primary counterbalance on a city’s spending authority.
But with new financing schemes, just four city council members can enter into a binding contract with major, long-term implications and no public input. Voting out officials we don’t like after the fact won’t change the results. Proposition 401 simply restores the vote you used to have. Before putting a project on a ballot the City will have to provide a clear description of the project, its value, its cost, and how it will be financed. Proposition 401 forces the city to think these items through, document them, and present them in a transparent way. The initiative includes provisions to prevent breaking big projects up into little ones, and underestimating and using cost overruns. It has exceptions for true emergencies such as major repair of existing water or sewage systems. This is a local, grassroots, and volunteer effort. More information is available at: www.YesOn401.com

CON:
Written by David Maurer, CEO, Prescott Chamber of Commerce since 2004, previously President/CEO of the Flagstaff Chamber of Commerce for ten years, city lobbyist/economic development manager at the Phoenix Chamber for ten years, Heard Museum development director, five years
Prop. 401 proposes to take decision-making out of the hands of our elected officials and instead asks the general public to vote on major projects of $40 million or more. A small group of citizens circulated initiative petitions to place this issue on the November ballot. Although there has been no single project valued at $40 million in the City of Prescott yet, supporters of 401 have their sights set on the Big Chino Water Ranch Pipeline project.
Let’s face it: any project worth $40 million or more is not going to happen overnight. The pipeline project has already been in the works for more than five years, with ample opportunities for citizen input.
We elect our mayor and council to study projects like this one very carefully and if we’re unhappy with their decisions, we have the opportunity to vote them out of office. If the pipeline project was ever put to a public vote, would the average citizen have access to the many studies and discussions that preceded the vote? Would the average citizens take the time to educate themselves and make an informed decision? Many citizens are not registered to vote; many of those who are registered don’t vote, so who really gets to decide public policy on projects valued at more than $40 million? Aren’t our elected officials capable of representing our interests and making informed decisions?
Who is really behind Proposition 401? Look up their campaign committee reports on the Internet and you’ll see only about a half-dozen citizens are financially supporting this campaign with contributions of $100 or more. Does this proposition truly have the broad public support that the committee members claim, or are a small handful of citizens again attempting to take control of public policy matters out of the hands of elected officials?
New Membership Handbook

Our League has produced a new Membership Handbook. It contains valuable information about the league, procedures the league uses and the local, state and national positions. This handbook will be distributed beginning with the October general meeting to all members who have paid their 2009-2010 dues.

The membership list is not included in the handbook. It will be distributed beginning in November. Its format will allow members to include it in the membership handbook or to keep it separate.

Those who worked on the new handbook are Betsy Barnes, Terri Farneti, Alice Harris and B.J. Wojcik; thank you.

League of Women Voters ANNUAL DUES are Due now! Only Current Members will be included in the new Directory.

NAME:_________________________________________________________________
ADDRESS:_______________________________________________________________
CITY/ZIP:_______________________________________________________________
PHONE:__________________________________ FAX:___________________________
EMAIL__________________________________

$55/Yr Individual Membership [or] $82.50/Yr Household Membership

$________ Contribution (not tax deductible) $________ Education Fund (tax deductible)

Mail your checks with this form to: LWVCYC, P.O. Box 25854, Prescott Valley AZ 86312
A nonpartisan membership organization, the League of Women Voters neither supports nor opposes political parties or candidates, but encourages informed and active participation in government, works to increase understanding of major public policy issues, and influences public policy through education and advocacy.