Lithium and Our “Green” Technology
by Sabrina Hardenbergh

SpaceX just launched a successful flight to the International Space Station, a technology wonder beyond the reach of most of us. Still, we use our laptops, cameras and cell phones. Many are acquiring a hybrid or electric vehicle (incorporating a lithium ion battery) to reduce greenhouse gas emissions to alleviate climate change. Battery storage also alleviates fluctuation in renewable energy inputs across the grid. Attention is on Tesla; yet the Chinese drive a half million electric vehicles, and about 100 Chinese firms manufacture electric vehicles. Other companies include Chevrolet (Bolt), Nissan (Leaf), Ford, Rivian (pickup truck, SUV), BMW, Volkswagen, Audi, and Chinese-European ventures, with varying prices and range (distance to next charging station an issue if traveling far). Other alternative energy vehicles, trucks, buses and trains are being designed to use hydrogen which have longer range and fuel up more quickly. However, hydrogen is currently produced using natural gas energy (versus solar or wind, defeating the emissions reduction intent), vehicle manufacture emits CO2 and other energy input versus return problems, and the charging stations are mostly limited to California and Hawaii, unless Anheuser-Busch’s vision pans out for its fleet, along with other truck companies. EV’s have won out. Yet while emissions or oil spills might be reduced using lithium, what are we trading it for?

A Tesla Model S battery contains 26.5 pounds of lithium. Battery back-up for the electric grid, fed by intermittent solar and wind energy, requires much more. Lithium is in the first stage of Elon Musk’s SpaceX Falcon 9 launch system which incorporates nine Merlin engines and aluminum-lithium alloy tanks of liquid oxygen and rocket-grade kerosene (RP-1) propellant. Lithium in different forms, like lithium carbonate, lithium hydroxide or lithium chloride, is used in lubricant greases, catalysts, pharmaceuticals, non-rechargeable (primary) lithium metal batteries and rechargeable (secondary) lithium-ion batteries, production of ceramics, glazes and glass, including heat-resistant glass and ceramics in ovens and cook tops. The lightest known metal, with tensile strength, lithium alloys increase strength-to-weight ratios, such as the aluminum-lithium alloys used in aerospace and motorsport industries, including SpaceX.

WHERE? HOW? In the Lithium Triangle (Bolivia, Chile, Argentina) which contains the largest deposits in the world, and in the U.S., lithium is produced by drilling through salt flats in extremely dry geographic regions, pumping up brine, allowing evaporation of water from this mixture of manganese, potassium, borax and lithium salts in successive evaporation pools for a year to year and a half, filtering off lithium from the other minerals, and producing lithium carbonate. In Australia, China and Canada, lithium is separated from hard rock ore (Continued on Page 2)
(Lithium and Our “Green” Technology, Continued from Page 1)

(spodumene, petalite and lepidolite, in granite pegmatite). Western Australian Greenbushes mine (the world’s largest producing spodumene deposit) supplies 30% of the world’s lithium. The Wodgina, Mount Marion, Mount Cattlin, Pilgangoora deposits in the Pilbara, and at Bald Hill in the Yilgarn are also mined. Australia considers all their lithium accessible, or not infringing upon environmental restrictions, government policies, military lands or national parks.

At a September 23, 2020 Battery Day event, Tesla announced entering into the lithium mining business, with the purchase of a 10,000 acre claim in Nevada, wherein they will use a new sulfate-free sodium chloride extraction method to separate lithium from clay. So far, Clayton Valley, Silver Peak, Nevada, has been the only lithium mine in the U.S., operated by Albemarle (which has global lithium mining operations). The mine shut down in August. Salt flats in this arid region contain more lithium. Australia-based firm Battery Mineral Resources owns lithium assets at Panamint Valley, CA and Amargosa, NV, near Death Valley National Park; their exploratory drilling permit request incited local environmental outcry in 2019. The Sierra Club, Center for Biological Diversity, and the Defenders of Wildlife say the drilling project and lithium extraction would bring industrial sprawl, large unsightly drying ponds, destroy spectacular panoramas, and threaten a fragile ecosystem that supports Nelson’s bighorn sheep, desert tortoises, and the Panamint alligator lizard. Lithium Americas is presently moving through the regulatory process to develop a mine at the largest and highest-grade known sedimentary lithium deposit in the USA at Thacker Pass in northern Nevada.

With a Chinese company, Ganfeng Lithium Co. Ltd., Lithium Americas also co-owns another lithium operation in northwestern Argentina, for which they claim environmental and socioeconomic consideration with the siting, solar energy and reuse of water. Ganfeng Lithium has agreements to supply BMW, Volkswagen and Tesla with lithium for their electric cars. Most lithium used for batteries comes from the Lithium Triangle (Bolivia, Chile, Argentina).

POLITICS? In considering environmental and health issues of lithium, realize the interrelated political economic history, or whole political ecology of lithium. Hugo Chavez presented President Obama with a copy of journalist Eduardo Galeano’s Open Veins of Latin America, highlighting five centuries of foreign occupation and resource extraction at the expense of millions of indigenous people’s health, livelihood, and lives. Revolutionary legend Che Guevara’s origins in Argentina, and demise in Bolivia by U.S. government supported machine gun firing, mark a moment in ongoing foreign wrangles for food, fuel and mineral extraction, via maneuvers to displace governments and popular leaders who aren’t on-board with foreign companies’ goals, even when local leaders have the support and interests of the local population.

This October, president-elect Luis Arce returns Bolivia’s socialist party to office, a year after President Evo Morales left, spliced by U.S. supported President Jeanine Anez and a recession. Under Morales, Bolivia and the United States severed diplomatic relations. Arce, wants to re-establish relationships with all countries, and exploit Bolivia’s lithium reserves to bring in $2billion for public investments in his five-year term. “If they want to re-establish a relationship with us, the only thing we ask for is that we are respected as equals,” Arce said.

July 24, 2020, Tesla’s Elon Musk wrote on Twitter that a second U.S. “government stimulus package is not in the best interests of the people.” A response, “You know what wasn’t in the best interest of people? The U.S. government organizing a coup against Evo Morales in Bolivia so you could obtain the lithium there.” Musk wrote: “We will coup whoever we want! Deal with it.”

Former President Evo Morales Ayma, President of Movimiento al Socialismo (MAS), of indigenous Aymaran descent, nationalized the lithium mining industry and other Bolivian agricultural and mining resources to use the proceeds for education, health and other public sector improvements. MAS, grown from indigenous and labor union roots, networked with the international indigenous movement against U.S. imperialism and neo-liberal economic policy. Morales’ government made considerable change in the organization of state and society, yet tensions between the social and cultural justice and the ongoing extractivist national development model are problematic, whether silver, (Continued on Page 3)
Moreover, obscuring centuries long colonial Latin American history of structural inequality and race/racism, the conservative elite have repositioned themselves as newly “oppressed” and “marginalized” peoples. Enter United States supported extreme right-wing interim President Jeanine Áñez, who displaced Morales in November 2019, with attempt to privatize national resources. In an interview with Glen Greenwald, Morales blamed the U.S. for enabling right-wing coup leaders because he sold Bolivian lithium to China instead of the West (and relations with Cuba, Venezuela and Iran). Bolivia had just begun lithium extraction, a potassium chloride plant, and a lithium carbonate plant was planned for 2020 toward a total of 41 nationalized plants supplying lithium hydroxide, lithium carbonate and potassium chloride for local uses, including a battery plant, the proceeds channeled toward public services. Bolivia could set its own lithium prices, in coordination with Europe, China and Asia, the US left out. Morales notes he was deposed by a lithium coup d’état, even more than a coup against himself and MAS’ political economic policies. Elon Musk plans to use Bolivian lithium over the border in a new Brazilian Tesla electric vehicle factory he wants to build. Musk already uses Australian lithium.

ENVIRONMENT & HEALTH? Lithium carbonate and lithium citrate, in small doses, have long been prescribed for bipolar disorder, but the medication has numerous side-effects, drug interactions, and potential for toxic outcomes. CDC and OSHA list lithium’s health and explosive hazards. Lithium is on a Right to Know Hazardous Substance List and Special Health Hazard Substance List, so New Jersey state workplace lithium exposure warnings include:

- Lithium can affect you when inhaled.
- Contact can severely irritate and burn skin and eyes.
- Inhaling Lithium can irritate the nose and throat.
- Inhaling Lithium can irritate the lungs. Higher exposures may cause a build-up of fluid in the lungs (pulmonary edema), a medical emergency.
- Exposure to Lithium can cause loss of appetite, nausea, and vomiting.
- Lithium can cause headache, muscle weakness, loss of coordination, confusion, seizures and coma.
- Lithium may affect thyroid gland, kidneys and heart function.
- Lithium is reactive and a dangerous explosion hazard.
- Lithium is corrosive when in contact with moisture or water.

Warranting need for strong EIS protocols for lithium extraction and processing, further hazards include:

- Socioeconomic/political economic destabilization issues (Bolivian example above, intertwined with the further hazards below, as mechanisms)
- Excessive water use, desertification; 500,000 gallons of water per ton lithium. Chilean lithium extraction uses 65% of regional water supply, compromising local livestock, farming, human and wildlife water needs in the arid location. Evaporated water could be captured and reused. Yet in China and the Lithium Triangle, water pollution from hydrochloric or sulfuric acid, used in the extraction process, migrates to streams and drinking water sources, harming fish, livestock, people and crops. At Silver Peak mine, Albemarle claims an employee-led avian protection program to protect, rescue, rehabilitate and relocate migratory birds that land in the higher-salinity ponds, and monitors brine pumping and water quality in their Chilean operations in near threatened Chilean Flamingo habitat.
- Soil pollution (with chemicals used to process lithium, e.g., hydrochloric or sulfuric acid)
- Air pollution
- Recycling issues if lithium batteries aren’t recycled (by various burning, bacterial and hydrological techniques) for reuse of minerals (thus, less mining needed), and ions leak into the environment. Similar extraction, processing and disposal/recycling issues occur with concurrent use of other minerals in batteries: cobalt, magnesium, nickel, aluminum, copper (and hydrogen vehicles currently use nickel batteries). Congo has ‘artisanal mines’ where cobalt is extracted by hand, often using child labor, without protective equipment. Other companies source cobalt in Canada and the U.S. Tesla, Toyota and BMW are working with battery suppliers to develop non-cobalt containing batteries, substituting nickel, although battery life may be less. Aluminum batteries are also being researched.

“We’re fooling ourselves if we call this sustainable and green mining… The lithium fever should slow down because it’s directly damaging salt flats, the ecosystem and local communities.” -- Cristina Dorador, Chilean biologist
WINTER 2020/2021: SHAWNEE GROUP SIERRA CLUB VIRTUAL MEMBER PROGRAMS

Information for joining these online Zoom webinar meetings will be shared later by Shawnee Group email, Shawnee Group of the Sierra Club Facebook Page, and at https://www.sierraclub.org/illinois/shawnee.

No Shawnee Group member programs in December or January. However, do consider other Illinois Sierra groups’ virtual presentations: www.sctrips.org

DATE & TIME: Thursday, February 11, 7:00 – 8:00 pm
VIDEO, PRESENTATION & DISCUSSION: “The Story of Stuff: The Cycle of Consumable Stuff & How We Can Build a Healthier Planet”
PRESENTERS/FACILITATORS: Sarah Heyer & Tasis Karayiannis
LOCATION: via Zoom weblink—registration access to be shared later by email and on the Shawnee Group Sierra Club’s Facebook page.

Volunteers Needed to Help Protect Shawnee National Forest
Protecting Shawnee National Forest involves frequent communication with the Forest Service, research on issues, and educating others about those issues. We especially need help in keeping oil and gas wells out of the forest - including fracking wells. Please contact Barb at babitaji@aol.com if you are interested in helping in any way.

Concerned about fracking?
Contact Barb McKasson at babitaji@aol.com if you are interested to help. Bills to support in Springfield, include HB282 (fracking transparency bill) and HB1562 (People’s Property Protection Act, concerning subsurface trespass), so do contact your legislators. However, Barb can alert you of many action, outreach and planning opportunities that come up.

FYI, to receive more timely alerts from the Illinois Chapter of the Sierra Club, sign up online at their state website: https://secure.sierraclub.org/site/SPageNavigator/Chapter/il_newsletter_signup.html;jsessionid=84420F4C49A5A8CD264E1E3C3F131E25.app205a

Call for articles and photographs for Shawnee Trails! The next issue will be published in March. Please send your Word, PDF or JPG files to sabrina@midwest.net by Monday, February 1st.

Top of the plastic trash heap

New research shows that the United States is the largest producer plastic waste in the world.

Total plastic waste generation, 2016 (millions of metric tons)

<table>
<thead>
<tr>
<th>Country</th>
<th>Tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>42.8</td>
</tr>
<tr>
<td>India</td>
<td>26.3</td>
</tr>
<tr>
<td>China</td>
<td>21.6</td>
</tr>
<tr>
<td>Brazil</td>
<td>10.7</td>
</tr>
<tr>
<td>Indonesia</td>
<td>9.1</td>
</tr>
<tr>
<td>Russia</td>
<td>8.5</td>
</tr>
<tr>
<td>Germany</td>
<td>6.7</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>6.5</td>
</tr>
<tr>
<td>Mexico</td>
<td>5.9</td>
</tr>
<tr>
<td>Japan</td>
<td>4.9</td>
</tr>
</tbody>
</table>

Per capita plastic waste generation, 2016 (kg/year)

<table>
<thead>
<tr>
<th>Country</th>
<th>Per Capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>410.1</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>99.7</td>
</tr>
<tr>
<td>South Korea</td>
<td>88.1</td>
</tr>
<tr>
<td>Germany</td>
<td>81.2</td>
</tr>
<tr>
<td>Thailand</td>
<td>69.5</td>
</tr>
<tr>
<td>Malaysia</td>
<td>67.1</td>
</tr>
<tr>
<td>Argentina</td>
<td>65.0</td>
</tr>
<tr>
<td>Russia</td>
<td>58.7</td>
</tr>
<tr>
<td>Italy</td>
<td>55.5</td>
</tr>
<tr>
<td>Brazil</td>
<td>51.3</td>
</tr>
</tbody>
</table>

* 1 metric ton = 1.1 U.S. tons; 1 kg = 2.2 pounds

RYAN MORRIS, NG STAFF
SOURCE: SEA EDUCATION ASSOCIATION
WINTER 2020/2021 – NO SHAWNEE GROUP SIERRA CLUB OUTINGS

Because of Governor Pritzker’s Executive Orders and their direction to shelter-in-place during the COVID-19 pandemic, related Illinois Department of Public Health and CDC guidelines, and Illinois Chapter and national Sierra Club response, we will not have organized group outings for a while. Still, the governor’s orders do recognize the health benefits of allowing individuals to exercise outdoors (e.g., walking, hiking, running, bicycling), so long as one is not sick with COVID-19, avoids crowded places (possible at trailheads), and follows social-distancing guidelines of staying 6 feet apart from other people. Those at higher risk of negative COVID-19 outcomes, including the elderly and those with pre-existing health conditions, are advised to stay at home. In southern Illinois, some federal and state park land has reopened for socially-distanced use such as hiking. However, some park facilities like bathrooms, playgrounds, campgrounds and shelter houses may still be closed because they attract a crowd, and they have commonly touched surfaces where one could transfer the COVID-19 coronavirus.

Check the Shawnee National Forest and Illinois Department of Natural Resources’ state park websites for updates and rules about hiking trail and waterway closures and openings during the COVID-19 pandemic. IDNR state parks: https://www2.illinois.gov/dnr/closures/Pages/ParksOpenDuringCoVID19.aspx
Shawnee National Forest: https://www.fs.usda.gov/shawnee
Crab Orchard NWR: https://www.fws.gov/refuge/crab_orchard/

Visit our older Shawnee Group Sierra Club blog page, lower right side (Index), for a list of weblinks to local hiking trail descriptions, and directions about how to get there: https://shawneegroup.blogspot.com/

***

Service Outings – Help Save High Quality Natural Areas
Shawnee Group is committed to helping rid high-quality natural areas of non-native invasive plants (NNIS) that are threatening to crowd out our native plant communities at La-Rue Pine Hills Research Natural Area (Snake Road) and at Fern Rocks Nature Preserve (Trillium Trail) in Giant City State Park.

COVID-19 pandemic guidelines restrict group activities, but service outings will eventually occur again.

Please consult our web page sierraclub.org/illinois/shawnee or our Facebook Page (Sierra Club Shawnee Group) for further developments in 2020 or contact Barb at 618-549-9684, babitaji@aol.com or text 618-534-7440.

Piasa Palisades Group Outings Chair:
Carol Klinger, 618-288-5506, ciklinger@yahoo.com
http://www.sierraclub.org/illinois/piasa-palisades

Eastern Missouri Group Outings Chair:
Doug Melville, 636-288-1055
douglas.k.melville@gmail.com
http://sierraclub.org/missouri/eastern-missouri

Future Outings TBA:
Updates listed on our or Illinois Chapter websites:
http://www.sierraclub.org/illinois/shawnee
https://www.sierraclub.org/illinois/events-calendar
Other short notice outings and events may be announced on our Facebook page:
https://www.facebook.com/SierraClubShawnee
With renewable energy funding from the Future Energy Jobs Act running out, passage of the Clean Energy Jobs Act can’t wait.

Once passed, CEJA will immediately restart renewable energy investments, building 17,000 MW of solar and 6,300 of wind to achieve a carbon-free Illinois by 2030 and 100% clean energy by 2050. The most harmful polluters will be the first to close. Also crucial in CEJA is its robust support for electrifying transportation, cutting emissions by the equivalent of taking 1.2 billion gasoline and diesel vehicles off the road by 2030. Provisions to achieve this reduction include investment in public transit bus electrification, rebates for vehicle purchases by low-income residents, last-mile electric shuttles serving transit deserts, and mass market charging infrastructure. Electrifying transportation including mass transit is crucial since the transportation sector energy use in the U.S. is now the greatest contributor to greenhouse gas emissions, accounting for a full 28% as compared to Industry, 22% and Commercial and Residential, 12%.

Important to note, these and other CEJA provisions will be paid not by the State but through a variety of charges, including continuing the small renewable energy fee on electric bills, first initiated to fund the Future Energy Jobs Act (FEJA). CEJA is also funded by charges coal plants must pay for fossil fuel pollution and a 6% Coal Severance fee on coal extraction, long ago required in most other coal producing states. For low income consumers, CEJA provides for energy bill savings and low-cost clean energy, including via CEJA’s expansion of FEJA’s Solar for All program.

Passing CEJA also can’t wait given the desperate need in Illinois for sustainable jobs, such as CEJA will foster. The need for more and better jobs is especially important in economically disadvantaged areas hit hard by COVID, by pollution-driven health issues, and by plant closures. And, in light of Vistra’s recent announcement that it will close all its remaining Illinois coal power plants, the need to jumpstart our COVID burdened economy through clean energy jobs and the private investment CEJA will promote is more evident than ever. Also central to CEJA and its benefits are its many justice-centered job and community support provisions. Here are just a few of them.

In addition to saving Illinois consumers $1.7 billion on their utility bills, CEJA

- **CREATES 16 WORKFORCE DEVELOPMENT HUBS** that deliver community education and workforce training for members of economically disadvantaged communities, environmental justice communities, communities of color, and former fossil fuel workers who are training for clean energy jobs. Four of the 16 hubs will be based in the southern Illinois cities of Carbondale, Alton, E. St. Louis, with the site of the fourth southern Illinois hub yet to be designated).

- **CREATES AN ENTREPRENEURSHIP & CONTRACTOR INCUBATOR PROGRAM**, designed to ensure a thriving clean energy economy, shared by all Illinoisans. Altogether, CEJA provides nearly $100 million each year towards workforce development and Solar for All. It also provides $21 million per year for disadvantaged contractors and entrepreneurs to support their access to capital, insurance, and firms hiring contractors and subcontractors.

- **CREATES STRONG CONNECTIONS TO ILLINOIS SOLAR FOR ALL**: $50 million per year to increase solar projects in low-income and environmental justice communities, bringing projects closer to where they are needed most.

(Continued on Page 7)
• PRIORITIZES EQUITABLE HIRING & OWNERSHIP—gives priority to companies that hire a minority workforce and hire workforce hub training graduates, and create community benefits agreements.

Given the great popularity of CEJA among Illinoisans, CEJA shouldn’t have to wait. According to a May 2020 poll, 82% of Illinoisans support CEJA’s passage. And that support is bipartisan and state-wide. Indeed, seventy-six percent of southern Illinoisans support it. And the overwhelming majority, 74%, say CEJA should be passed this year!

HOW YOU CAN HELP: Call Governor Pritzker and urge him to press for passage of CEJA (HB3624/SB2132) during the fall veto session. And call your legislators, no matter their stance on clean energy. Tell them Illinois needs CEJA to spur economic growth, clean and sustainable jobs, reduce energy bills, and improve the health of Illinois residents and our environment. You can find the contact information for the Governor, your representative and senator in this newsletter (below). If you don’t know who your legislators are, go to: http://elections.il.gov.

Solar For All Income Eligible Community Solar Opportunity

The Carbondale Community Solar Working Group, a local nonprofit formed in 2017 to bring affordable solar to our area, is partnering with Nexamp and Trajectory Energy Partners to offer eligible Carbondale residents who are Ameren customers an opportunity to save 50% on their Ameren Purchased Electricity Supply Charge (not transmission or delivery fees), while also supporting local solar energy generation. No upfront investment or long-term commitment is involved. The Illinois Solar For All program is administered by Elevate Energy on behalf of the Illinois Power Agency, an independent state government agency. See: https://www.illinoissfa.com/app/uploads/2019/10/0919-ILSFA-infosheet-low-income-community-solar-v11.pdf

Contact Trajectory Energy Partners at 309-839-4985 with questions about subscribing. To know more about the Carbondale Community Solar Working Group, one of the local non-profit groups supporting this initiative, contact Jane Cogie (jane.cogie@gmail.com) or Karen Knodt (pastor@cdalefcc.org).

Illinois Legislative Contacts: CALL YOUR LEGISLATORS TODAY!

State Dist. 115 - Rep. Terri Bryant: 618-242-8115; 217-782-0387; staterepeterribryant@gmail.com
State Dist. 116 - Rep. Jerry Costello II: 618-282-7284; 217-782-1018 Staterepcostello@gmail.com
Senate Dist. 55 - Senator Dale Righter: 217-235-6033; 217-782-6674; dalerigher.com/Contact
Senate Dist. 58 - Senator Paul Schimpf: 618-684-1100; senshimpf58@gmail.com
Senate Dist. 59 - Senator Dale Fowler: 618-294-8951; 217-782-5509; senatorfowler59@gmail.com
Governor JB Pritzker: 217-782-6830; https://www2.illinois.gov/sites/gov/contactus/Pages/default.aspx
Speaker of the House Mike Madigan: 217-782-5350; 773-581-8000; mmadigan@housedem.state.il.us
Senate President John Cullerton: 217-782-2728; 773-883-0770; jcullerton@senatedem.illinois.gov

Congressional Contacts: CALL YOUR CONGRESSMEN TODAY!

Senator Dick Durbin: 618-351-1122; 202-224-2152; http://www.durbin.senate.gov/
Senator L. Tammy Duckworth: (202) 224-2854; https://www.duckworth.senate.gov/
Representative Mike Bost: 618-457-5787; 202-225-5661; https://bost.house.gov/
Shawnee Group

Sierra Club

T-Shirts for Sale!

Show your support for our local group’s activities.

Contact Barb McKasson at 618-549-9684 or ba4ba5lu@aol.com.

White logo on blue T-Shirt $15
Medium   Large   or   X-Large

Arctic National Wildlife Refuge Action Alert

During his finals days, reversing earlier decades of protections, Trump’s administration opens 32 coastal oil drilling tract leases in the Arctic National Wildlife Refuge, with a Tuesday, Nov. 17, 2020 Federal Register announcement. Public comments are due on or before Dec. 17th. Unlike most public commenting, an online method is not allowed this time, only mailed comments, sent all the way to Alaska. MAIL your comments ASAP, for receipt before December 17th to State Director, Bureau of Land Management, Alaska State Office, 22 West 7th Avenue, Mailstop 13, Anchorage, AK 99513-7504. Read the Federal Registrar announcement’s directions and the Alaska BLM website to see the coastal map, and use their Worksheet to describe your comments about each tract. Read about the issues, in earlier public comment periods for topics to reiterate concerning wildlife, indigenous cultural heritage and seismic testing.

Leadership Opportunities

Run for the Board! We need a few good women and men. Join the board of directors (the executive committee, also known as the ExCom) in overseeing the Shawnee Group's strategic direction and economic health. Board members meet monthly for about 2 hours. Board terms are for two years. We are always interested in potential candidates.

We need Hospitality team members

Provide refreshments for one monthly meeting each year (2nd Thursday). Be the Hospitality Chair to organize refreshment providers and greeters OR Act as a greeter for a monthly meeting or welcome and assist our speaker OR Select and make reservations at a local restaurant for our monthly “Dinner Before the Meeting.” Contact Jane Cogie, 618-549-4673, jane.cogie@gmail.com.

Has Your Email Address Changed?

To receive notification when the latest Shawnee Group newsletter is posted online, be sure to inform the Group when you change your email address. Send email address updates to: crusso1957@yahoo.com.

Read current and past newsletters on our website: http://www.sierraclub.org/illinois/shawnee. The website also lists information on upcoming local programs and outings, plus state and national Sierra Club issues.

Photo: Christopher Miller, read more in The New York Times