



Kansas Natural Resource Council

Fall 2008 Journal

Energy Efficiency: The First Fuel

**By Rose Phillips
KNRC Intern**

During the legislative battle over the Holcomb coal plants, we kept hearing from the pro-Holcomb side, "All you say is 'no coal.' But you don't offer any alternatives to meeting Western Kansas' growing electricity demand." They had a point; western Kansas will need 200 megawatts (MW) of electricity by 2012, and either new natural gas generators or buying power on the open market would be expensive. As an alternative, Kansas environmentalists proposed a combination of wind power and energy efficiency and conservation (EE&C) programs. But the pro-Holcomb forces dismissed wind on false premises, and more or less ignored EE&C.

Efficiency and conservation programs alone, however, are very promising. We have a great deal of "low-hanging fruit" of wasted energy in our homes and businesses: leaky doorways, windowpanes, and vents, walls and ceilings without insulation, inefficient appliances, thermostats turned up too high or low, and so on. EE&C measures trim this waste, saving us money in the process. The beauty part is, if we slow demand growth through EE&C, utilities can defer the need for expensive new power plants and transmission lines, costs that would be passed on to ratepayers.

It may sound too good to be true, but many states already have successful EE&C programs. Perhaps the most lauded example is Vermont, whose comprehensive and aggressive energy efficiency program completely flat-lined demand growth in seven years, according to preliminary reports, and

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provided the state with millions of dollars in economic benefits.

Vermont has a long history of promoting EE&C, going back to the 1973 oil crisis. Utilities were in charge of developing and implementing EE&C programs, with guidance from the utility regulatory agencies and the legislature. Despite their best efforts, however, Vermont's EE&C framework "was a model of inefficiency for years." The state's many utilities each implemented their own program, with little or no coordination, and some were better than others. Moreover, the utilities had a fundamental conflict of interest. They made profits by selling power, not by saving it, so utilities with less EE&C spending were more competitive.

Thus, in 1997, the Department of Public Service (DPS), one of Vermont's utility regulatory agencies, proposed creating an independent energy efficiency utility (EEU) to deliver uniform and comprehensive EE measures. Over the next two and a half years, stakeholders held negotiations, legislation was passed to clarify the utility regulators' authority to create the EEU, and utilities transitioned to the new system. Efficiency Vermont began operation in early 2000.

Efficiency Vermont was the first state efficiency utility in the nation. It is officially an independent, non-profit corporation, funded by a service benefit charge on electric customers' utility bills. The funds never officially become state

revenue, so they bypass several expensive steps of bureaucracy. Vermont's Public Service Board sent out a bid for contractors to run the utility's day-to-day operations, and selected the nonprofit Vermont Energy Investment Corporation (VEIC). The contract is reviewed and renewed every three years, and a new bid is issued every six years. The EEU has considerable autonomy, but answers to the DPS and the Public Service Board (PSB). The contractor's amount of pay and continued employment depend on its meeting rigorous performance goals, and the overseeing agencies verify and adjust its energy savings claims.

Efficiency Vermont is a "one-stop shop" for energy efficiency services. Its toolkit includes efficiency improvements for existing appliances and homes (e.g. weather stripping, insulation, and retrofitting) and efficient new appliances and building designs. EVT promotes these tools through activities such as:

- Offering technical advice to customers via its website and a toll-free hotline;
- Fostering relationships with builders, vendors, and contractors;
- Arranging delivery of contractor services and financial incentives;
- Negotiating prices for and purchasing bulk products such as CFLs; and
- Targeting low-income households, farms, and regions with high demand and/or limited generation and transmission capacity.

Its ongoing short-term goal is to reach a large percentage of energy customers with energy-saving measures, such as home and appliance retrofits, and rebates for buying efficient new products. The long-term goal is market transformation: getting efficient products and building designs so ingrained in the market that incentives are no longer necessary⁵. Utilities still operate some demand-side management (DSM) programs, such as encouraging people to reduce electricity use during peak demand periods.

Since its inception, Efficiency Vermont has done a stellar job. In its first three years it reduced demand growth by nearly half, and has only improved, completely offsetting demand growth in 2007. Correspondingly, its budget and performance goals have increased with each contract review period. To date, EVT has helped almost 60% of the state's electricity customers, with all customer classes and regions reporting benefits. Between

2000 and 2006, EVT has saved Vermonters 307 million kilowatt-hours (kWh) and \$31 million in energy costs, with an expected \$313 million in savings over the measures' lifetimes. Each dollar spent on energy efficiency yields more than two dollars in benefits, and generates multiplier benefits in the local economy. In a 2006 state scorecard by the American Council for an Energy Efficient Economy (ACEEE), Vermont ranked first in the nation (tied with CA and CT). In addition, the Council for Excellence in Government granted EVT its prestigious American Government Award in 2003. And the program places a minimal burden on ratepayers: the service benefit charge is currently 4.5%, and EE&C costs ratepayers 2.6 cents per kWh, compared to 10.7 c/kWh for electricity.

Compare Vermont's phenomenal success story to Kansas and the difference is like night and day. On the same ACEEE scorecard that Vermont topped, with 33 out of 44 possible points, Kansas was 34th, scoring only 7 points. Unlike Vermont, Kansas has no statewide EE&C program and no funding for comprehensive energy efficiency efforts. Getting down to basics, we have no plan for energy efficiency or progressive energy policy in general. Our state has long enjoyed cheap energy, and buildings historically were not constructed for efficiency (half of Kansas' homes were built before 1960). Unlike most states, Kansas shrugged off the '73 energy crisis and didn't pursue EE&C; instead, utilities overbuilt generation capacity. (To date, we still have more than enough baseload for most of the year; it's the summer peak demand that's driving our need for new baseload. If we could control this peak demand, there would be no need for new power plants for a long time.)

Recent years have seen some progress on energy efficiency in Kansas, but much of it has been modest and piecemeal. The past ten years of energy-related legislation contain a few laws promoting EE&C. Most are valuable, but they're isolated responses to specific parts of the EE&C challenge. Vermont's legislature, by contrast, has promoted EE&C with strongly-worded laws and broad policy statements since the '80s. Similarly, the Kansas Energy Council has so far fallen short of its mandate to develop a comprehensive energy plan and advise the legislature on energy policy. Many of its 35 members are oil and gas industry representatives and legislators skeptical of global warming, so the Council has been gridlocked on controversial policy issues. To its credit, the KEC is slowly filling in sections of its energy plan outline, and has compiled several reports and datasets. However, these materials have yet to be woven into a comprehensive plan. The energy efficiency section,

in particular, seems very preliminary. It gives a brief overview of the EE&C issue in Kansas, and lists existing state and federal policy tools for different sectors, but it doesn't read like a singular attack plan. Most of its five policy recommendations, while useful, are only tentative first steps.

Several of Kansas' large utilities and the Kansas Corporation Commission (KCC, the state agency that regulates public utilities), have acted somewhat more decisively. Kansas City Power and Light, Westar, Midwest Energy, and the Kansas City Board of Board of Public Utilities, have voluntarily created energy efficiency programs in the past few years. With skyrocketing costs for construction and generation, concerns about global warming, and the likelihood of future carbon regulation, they have acknowledged that business as usual doesn't cut it anymore. The KCC, meanwhile, has released one of two dockets on promoting utility-based EE&C programs by "decoupling" energy savings from their profits. In other words, the state rewards utilities for saving energy; California has used decoupling with great success. In addition, there are new actors on the Kansas energy policy stage: the Kansas Energy and Environmental Planning Advisory Group (KEEP), created by Sebelius to address the climate change issues that the KEC has avoided; and a legislative Joint Committee on Energy and Environment).

The jewel of recent energy efficiency efforts is a report by Summit Blue, a consulting company commissioned by the KEC, on EE&C potential in Kansas. The report contains specific data on energy use by sector and opportunities for savings, a critical ingredient in any comprehensive efficiency plan. It draws the following conclusions:

- EE&C programs could reduce electricity demand by 11% to 18% over the next 20 years.
- Both utility-run and state-run programs can be successful.
- In the very near term, Kansas probably can't develop a program as ambitious as Vermont's. It would be more practical to

emulate more modest, but still successful, programs in the Midwest.

What does this flurry of activity mean for energy efficiency and conservation in Kansas? And what does Vermont's experience teach us? First of all, we're not rigid zealots blocking western Kansas' path to energy security. Energy efficiency is a real answer. Secondly, we need hard data and policy tools, as Vermont's DPS had when it proposed the energy efficiency utility. The KEC and KCC are driving at this. We also need to decide whether we want a statewide independent utility like Vermont's, a utility-administered program like California's, or another design.

Another key factor is strong leadership from the groups in charge of planning. Vermont's EEU was developed mostly by the state's utility regulators, who had statutory authority to implement most parts of their plan. The KCC already has authority in critical areas, so perhaps the KCC could develop a strong plan, if the KEC and other advisory groups won't. Stakeholder groups such as business, industry, utilities, and environmentalists also need strong leaders. Efficiency Vermont owes much of its success to the fact that, in the planning stages, stakeholder leaders were willing to sit down out of court and hash out their differences. And, of course, a Kansas EE&C program will need sufficient, reliable funding.

The final ingredient, and the hardest to obtain in Kansas, is legislative approval. Just as Vermont's regulatory agencies did, the KCC will probably need new legislation to fill gaps in its authority to implement an EE&C program. In a state as hostile to expanded government, increased taxes, and encroachment on business interests as Kansas, this will be an uphill battle. As the promoters of Vermont's EEU did, we'll have to emphasize that energy efficiency makes economic sense, a public benefits charge is not a tax, and programs

like Vermont's exemplify public-private partnership and government accountability. But Blair Hamilton, Efficiency Vermont's managing director, has hope for Kansas. The watershed of the Holcomb battle, he says, has given us a great opportunity to pursue EE&C. Now, we just have to keep the momentum going.

(Ed. Note: See KNRC website for full article - including footnotes)

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Environmentalists Stave Off Holcomb Expansion in the 2008

Legislature

by Jim Mason

KNRC Secretary & Webmaster

The world is struggling to come to grips with the challenges of moving beyond a fossil fuel-based economy, and Kansas found itself squarely in the middle of the debate over the past year. KDHE Secretary Rod Bremby kicked off the controversy when he stunned all observers by denying the air permit for the proposed expansion of the Holcomb coal-fired power plant in southwest Kansas on October 18, 2007. He based his decision on the potential harm that would result from the 11 million tons of CO₂ that would be emitted by these new generating units each year. The utility involved, Sunflower Electric, and its allies in the legislature vowed to overturn this decision, and they spent the entire session trying to do so. They failed because of the extraordinary efforts of Kansas environmental groups working in coalition. Full details of the battle are on the KNRC website, but here is a brief summary.

Three different bills were advanced through the process by the pro-Holcomb forces during the 2008 session. The essential features of each were to circumscribe the authority of the Secretary of KDHE and to fast-track a reapplication for the air permit by Sunflower. In order to attract votes, several "green" features were grafted onto them, such as a limited net metering provision and mandating energy efficiency improvements for state buildings. Cynically, the legislative leaders did not allow the green bills to be debated on their own so these were never passed. For the third attempt, the pro-Holcomb forces raised the stakes even further by adding the coal plant bill to an eco-devo bill that would have benefitted cities in eastern Kansas. By this time, however, the eastern legislators were so upset with being manipulated by the pro-Holcomb forces that the margin of "nays" actually increased.

In the case of each bill, the essential "stops" were vetoes by the Governor and a lack of enough votes in the House to override the vetoes. It was very close, but the Holcomb bills were stopped each time. Public pressure on the legislators orchestrated by the Kansas environmental community to vote for Clean Energy was a key factor in preventing the overrides.

One might assume the Holcomb coal plant issue will be back in some form in the 2009 legislature. However, this depends somewhat on the outcome of the election in November. If those representatives

and senators who voted against coal remain in office, and if a few more Clean Energy folks get elected, it could effectively take the option off the table. To that end, KNRC has put together a record of how our state legislators voted in 2008 and 2007. It is available on our website www.knrc.ws. Please take a look at it and bear that in mind come November 4.

KNRC monitors the state legislature and sends periodic email alerts to members via the Kansas Legislative Update on the Environment (KLUE). If you have email and want to receive the KLUE report, drop a note to jmason15@cox.net

ANNUAL MEETING

KNRC will hold its 2008 annual meeting on Saturday Sep. 27 in conjunction with the Land Institute's Prairie Festival. All KNRC members are encouraged to attend, and also to participate in the Prairie Festival. If you stay for the day, be sure to register in advance for the Saturday night dinner of Kansas-grown food. (Details below.)

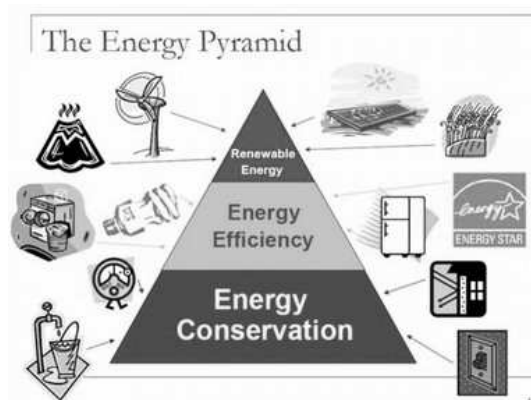
The meeting will happen between 1-2 PM in the barn. Highlights include:

- Presentation of Bill Ward Award – this year the BWA is being presented to Jim Mason
- Special recognition for Tom Thompson for his legislative monitoring efforts this year.
- Introduction of Board members
- Notice of upcoming events

To see the entire schedule for the Prairie Festival and download a registration form, visit the Land Institute website at:

www.landinstitute.org/

One of the featured speakers at this year's Prairie Festival will be author Barbara Kingsolver. See you there!



New Book: Paddling Kansas

If KNRC board member Dave Murphy had his way, he would have every Kansan in a canoe or kayak gaining an appreciation for the state's rivers and streams. His enthusiasm carried him on a 15,000-mile road journey to float and document the publicly accessible reaches of 32 rivers in Kansas. The product of his odyssey is a 172-page guide, "Paddling Kansas," that outlines 100 single or multi-day trips by canoe or kayak.

The book describes some 925 miles on more than 32 rivers, 60 river segments and more than 200 public access points. Murphy avoids a paddle stroke-by-paddle stroke account of what to expect on each river, emphasizing that no two days on any river will be the same. A river that's easy to run at low flow may be foolhardy for that same paddler at high flows.

Each river segment has a detail map, plus information about access points, stream gradients, float-time and distance estimates, shuttle directions, notes for anglers and sources of information on stream flow, camping and canoe rental. Plus enough "color" to give paddlers a general idea of what to expect on their own adventures. Maps show roads, put-ins, take outs, significant rapids, mileage and other useful information and interesting sidebars provide local history and relate the stream segment to its watershed. Extensive appendix entries offer web site listings for helpful resources.

He encourages canoeists and kayakers to explore the riverside towns along the major streams and the nearby communities in the rural areas so "remember to bring a clean shirt". Kansas streams have so much to offer. "They are not crowded. Most of them offer excellent fishing and abundant wildlife viewing. Best of all, they are here."

"I sincerely hope that through my book I can share my love for all rivers," says Murphy. "Only through first-hand appreciation will people gain the vision and strength of will to protect and insure coming generations the right to enjoy a free, wild and healthy future. All nature loving Kansans should have this book and share what they learn from it with their friends and family. This promo is not for my book, but for the beautiful rivers and streams of Kansas."

"Paddling Kansas" is available at most booksellers across Kansas, and on line from Trails Books, a division of Big Earth Publishing, www.trailsbooks.com for \$19.95 plus shipping and handling. Big Earth Publishing is located at 923 Williamson St., Madison, WI 53703. Phone (800) 258-5830. The book will be available at KNRC's annual meeting Saturday, September 27 at the Land Institute's Prairie Festival.

Peak Oil: It's Here, Now

**by Jim Mason
KNRC Secretary & Webmaster**

We are all familiar with the wastrel; someone who comes into a windfall of money and blows it all in a spending spree, then comes to a bad end. We nod knowingly whenever we hear of such a case and say to ourselves, "What a fool!" Yet it seems to be almost impossible for people to see the analogous situation with respect to ourselves and natural resources.

For example, petroleum is wonderful stuff. It is energy-dense, easily transported and stored, and able to be made into many useful compounds. What a blessing that so much of it was stored away in the Earth's crust millions of years ago. What a tribute to human ingenuity that we have been able to figure out how to extract and use it. What a tragedy that we will burn through it all in less than two centuries.

If you look around, there is virtually nothing you can point to that isn't dependent on oil, and not just that – CHEAP oil. It is the sine qua non for trade, modern agriculture and the dispersed settlement pattern and personal mobility entailed in the dominance of the automobile in modern life. Take away cheap oil and all of this becomes immediately unsustainable. It's happening now as you read this.

World oil consumption has been about ~85 million barrels per day since 2005, but world production has begun slipping during that time even as consumption ramps up in China, India and elsewhere. (The difference between demand and supply has been made up by other liquid fuels.) This has triggered the price rises of the last couple years as demand begins to outstrip supply – and if you think \$4 gas is shocking, you ain't seen nothing yet.

This was predicted decades ago by a petroleum geologist named M. King Hubbert. Using a sophisticated analysis of oilfield production curves and success rates in drilling discovery wells, he determined in 1956 that North American production of oil would peak around 1970. It happened in 1972. In 1974, he used the same methodology to predict that world oil production would peak in 1995. Three things made the latter prediction inaccurate. The oil embargo of 1973 sent the U.S. on an efficiency crusade that knocked consumption, and hence production, way back for awhile, and large oil fields were discovered in the North Sea and Prudhoe Bay, Alaska. Making adjustments for these factors changes the peak production year to, um, right about now.

Did we here in the U.S. listen to Hubbert and start seeking alternatives to oil? Nope. That dip in demand plus the bump in oil supply combined to make it incredibly cheap, so for the last 25 years we merrily blew it out the tailpipes of SUVs and Monster Trucks, while constructing energy-hogging McMansions further and further out into the hinterlands on the assumption that the good times of cheap oil would go on forever.

What does this mean for Kansas? What does it mean for individuals? The great challenge of this century will be the disappearance of petroleum from our energy supply. Whatever governing units and whichever people figure out how to carry on the project of civilization without it will succeed. Those who "put the pedal to the metal" on oil will fail. It's that simple.

For individuals, one strategy would be to make an assessment of how much of a role petroleum consumption plays in your life, and reduce or eliminate that role.

- Seek out and support local food producers rather than buying food from hundreds or thousands of miles away.
- Invest in improving the energy efficiency of your home.
- If the necessities of life are not within reasonable walking distance, consider relocating to a more walkable neighborhood.
- Use your car as little as possible, keep it tuned up and put fuel-efficiency at the top of the list when considering a replacement.
- Use mass transit. If your community doesn't have adequate mass transit, work in the public arena to create that option for you and your neighbors.

At the governmental level there is a debate between two paradigms. How this debate plays out will determine whether or not we can successfully move beyond petroleum. It is essential to educate decision makers on this topic and urge them to support a progressive approach to the challenge.

The traditional paradigm says that oil is running out, so let's switch to coal, which North America still has a lot of (but of course not an unlimited supply). One serious problem with a big shift to coal is the accumulation of CO₂ in the atmosphere because of the combustion of ALL fossil fuels over the last century. Burning coal adds even more CO₂ than burning oil does per unit of energy delivered. Adherents of this paradigm don't accept limits to growth however, and ignore and/or discount the threat of global climate change, so they refuse to face up to this.

The new paradigm, which acknowledges resource scarcity as well as global climate change, says we must move towards renewable sources of energy as fast as possible, using our remaining fossil fuels to enable the transition. Kansas fortunately has an abundance of both wind and solar power resources, so we should be in the catbird seat for this transition – if we will only seize the opportunity. It will never be cheaper or easier to tap our renewable energy resources than it is now. This paradigm also recognizes limits to growth, and says it is essential to reduce the per capita usage of energy through conservation and efficiency improvements regardless of the blend of fuels we use because it is impossible to sustain the current growth in consumption.

Spread the word! Right now, Peak Oil is off the radar screen of the media and most people don't know about it. There are several books out currently dealing with it and the following internet resources can help you to get up to speed:

www.TheOilDrum.com – has a good overview section

www.aspo-usa.com/ - U.S. section of the Association for the Study of Peak Oil & Gas

Community Forum on Kansas Environmental Issues

**By Kathy Riordan
KNRC Board Member**

The Prairie Village Environmental Committee and the Kansas Natural Resources Council (KNRC) are sponsoring our 7th annual **Community Forum on Kansas Environmental Issues** on Thursday, October 9, in Friendship Hall at the Village Presbyterian Church, 6641 Mission Road in Prairie Village, Kansas. The Community Forum begins at 5:15 with appetizers and exhibits by environmental organizations. A light supper of locally grown foods catered by *blue bird bistro* begins at 6:00, the program follows at 7:00.

This year's featured presentation "**Blowing Smoke: Environmental Law and Kansas Air Quality**" will be given by Karl Brooks, PhD, professor of History and Law at the University of Kansas. Dr. Brooks has written books, articles and chapters on environmental law and Kansas history. In February Dr. Brooks had an article in the Wichita Eagle titled, "Coal Plant Bills Play Politics with the Law".

In previous years the Forum has had presentations on important legislative initiatives, the Kansas Natural Resource Legacy Alliance report, preserving biodiversity in northeast Kansas, wind, prairie and

energy, growing and obtaining food with an eye to the future, and in 2007, the waters of Kansas: past, present, and future. We're looking forward to another enjoyable and informative evening this year.

Advance reservations are needed by October 6. A \$20 donation per person is requested. To make a reservation, send check marked payable to **KNRC/Community Forum**, 7301 Mission Rd, Suite 248, Prairie Village, KS 66208.

For more information about the Community Forum contact Teri Carey at ptscarey@mac.com or 913-579-7300.

On Healthy Kansas Values and Voting Records

**By Dave Murphy
KNRC Board Member**

Many of us have long been disappointed by the condition of our Kansas environment. Roadside trash is common, once bountiful streams now run dry, and rusting chemical tanks and old car bodies are used to stabilize river and stream banks. Agricultural and urban runoff, feedlots and septic systems pollute nearly 70% of our streams and every one of our lakes and reservoirs. Now the same leadership that has systematically refused to regulate Kansas water issues is preparing to bring its policy of non-regulation to coal-derived carbon dioxide emissions, in their second attempt to build Holcomb II.

The vast majority of Kansans reject contaminated water, dry streams, dirty air and more greenhouse gasses. Collectively, we defeated the Holcomb coal-fired power plants in the 2008 legislature, but that was only the first battle.

For a moment, picture a HEALTHY Kansas. In that vision you may be reminded of other states and other countries you have visited, where people highly value the beauty, richness and diversity of their natural resources, and where those values are deeply ingrained into public policy and enforced by all branches of government.

The demise of our rich natural Kansas heritage did not happen in another lifetime. This is largely our mess. The special-interest-controlled Kansas legislature has adopted a policy of environmental non-regulation and non-enforcement that systematically turns its back on the common good. For example: Witness the near absence of water quality standards enforcement on the thousands of feedlots that line our rivers and streams, and witness

the silence of many local governments on the tens of thousands of faulty private septic systems that overflow into our rivers and streams. These are the two most severe contributors of dangerous waterborne bacteria in the state, and both significantly contribute to the excessive nutrient loads that are poisoning our river systems, our lakes, and the Gulf of Mexico. The legislature's attempt to strip KDHE of its ability to regulate CO2 emissions is just one more attack on Kansas values.

By our words, by our deeds, by our financial backing and by our votes we can replace special interests with Kansas values. Only then can we adopt and enforce laws that protect the common values and rights of all generations.

We must ensure that Kansas values show up at the polls in a smart way in November. To win against the entrenched special interests, we need overwhelming, well-educated popular support, an effectively mobilized public media, and financially supported pro-environmental candidates.

Let us not be fooled by rhetoric and preconceived alliances. Environmental issues cross political party lines. We must recognize the friends that we have among both political parties and make new friends when we can. Examine the environmental voting record of the Kansas legislature at <http://www.knrc.ws>. Between now and November, and for the rest of your life, help us create a healthy Kansas that is governed by healthy Kansas values.

Time to Renew Your Membership

September is the end of our fiscal year. Those of you on the KLUE email distribution list have already received a notice to renew your membership. This is a reminder to those who do not participate in that medium. Renewal rates are:

- Student/ Senior \$25
- Individual \$30
- Family \$40
- Organization/Institutional \$60
- Contributing \$100
- Supporting \$250
- Sustaining \$500

Make your check out to "**KNRC**" and send it to:

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