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ith gas prices soaring higher and higher, local inventors are getting closer to making engines that run on water. Sound far-fetched? Well, it's not. The pain at the pump is hurting us all, but believe it or not, there are many people out there working to eliminate our need altogether for that black gold. "There will be alternative fueled vehicles that are being tested. Some of

them will end up being great successes. Others will end up being failures." David Allen with the UT Department of Chemical Engineering said. We met an Austin man determined to solve that problem, but let's start with a Florida man who says he's already done it. Dennie Klein lives in Clearwater, Florida and says he's invented a

machine that allows his old Ford Escort to use water for fuel instead of gas. Klein, who runs a company called Hydrogen Technology, believes his invention is a resounding success, kxan.com said. "We virtually open this valve and start injecting the Aquagyn into the engine," Klein said. He developed a formula called Aquagyn--a

hydrogen/oxygen gas mixture that he says can make your car run instead of using strict gasoline. It's a new type of hybrid. "So, as we drive down the road its making the gas from water on demand as we drive," Klein said. Now, using water to power cars has been tried before, but the amount of energy needed to get

hydrogen out of water was immense. However, Klein says he's solved that problem. Part of the solution is using the wasted energy from a car's alternator to separate the hydrogen and oxygen in water. "If you have excess electricity that is otherwise being wasted, one possibility is to make hydrogen out of that wasted electricity and

then use that hydrogen," Allen said. Allen is doing his own project with TxDOT and soon, possibly, the federal government. He and his team are also working to produce hydrogen-powered vehicles. "It would be a fuel-celled bus. So you take a hydrogen fuel, you put it into a fuel cell and it generates water as the end product and electric-

ity to power the bus," Allen said. So, does all this mean we're going to soon pay a lot less to drive? Allen says it all depends on how much it would cost to adapt to the new technology. The Aquagyn produces oxygen, which can melt through brick and turn a brass ball into liquid metal. The only problem is when that oxygen so hot,

Allen says it could possibly burn the cylinders in your car, which could require you to get a car specially made to withstand the heat. Klein says if you take a look at his old Ford Escort. With just eight ounces of water, he drove 100 miles. There's a lot of competition out there to make the successful car of the future. One guarantee is that there will be cleaner, more efficient cars on the road soon and hopefully more money in your wallet.

Cars Running on Water?

Getting Used to Life Without Electricity

In half or more of Uganda's local languages, electricity is called masanyalaze. Now, the same word is used to mean paralysis and, contradictorily, extreme ecstasy. We would need a lingual expert to tell us whether the electricity from batteries, generators and hydro-turbines was named after these physical conditions of the body, or our ancestors simply knew about electricity before modern technology came with the colonialists. We cannot rule out the possibility that those Ugandan folks knew a thing or two about electricity since they were aware of it in various forms, nationmedia.com reported.

They had glowworms, suffered shocks from electric fish and, of course, they were aware of nervous impulses in their bodies. But now that shortage of electricity is the subject on everyone's lips, one wonders what our forefathers of the early 20th century had in mind when they referred to stored electricity in batteries, and later hydro-electric power, as masanyalaze. Were they thinking of paralysis or ecstasy? A couple of years ago and before, anyone debating the question would have thought of ecstasy, for electricity really brings joyful energy. Mind you, they have words for shock, but they never used it for electricity. Apparently, since electricity only gives a shock as an accident, they chose not to name it "shock," and opted for what it does by design, what it is expected to do. However, if debating the origin of our local name for electricity were to take place this year, many people would say that our forefathers were thinking of paralysis. For we only see electricity in terms of messing up our lives and the economy today. At the macro level, we are told that GDP is falling and the revenue authority is suffering an increasing collection shortfall every month, now standing at about \$7million for April. So if the annualized shortfall comes to \$80 or 90 million, or about a fifth of the projected collections, you can imagine the paralysis the electricity will have on public expenditure on social services, infrastructural development and maintenance. At micro level, the electricity crisis has para-

lyzed life to alarming levels. Many people who had been thriving in small-scale industrial activity cannot work any more, and their very survival is now threatened. Suburbs that were bustling with activity as artisans worked in their workshops by day and music boomed at night have all gone silent and dark. Could this be the paralysis our grandfathers had in mind when they called electricity masanyalaze? In individual homes, life has become so paralyzed that houses look like caves after dark--that is when you get close enough to notice that there is a house. On nights when there is no moonlight, people have difficulty locating their homes if they did not enter early enough--with the chicken, as the saying goes. Numb, that is what has happened to life. And that is what people say when they have sat badly and due to inhibited blood flow, they can't stand up or walk properly. "I have electricity," is the standard local phrase in such a situation. In more grave situations, when a patient has suffered a stroke, no prizes for guessing how our people express it in vernacular. "He is electrified," they say. In many cases, stroke patients are paralysed on one side, and so we say that so-and-so has electricity on one side. Clearly, our forefathers were thinking more of paralysis than ecstasy. But wait a minute. Maybe they were thinking of both. For while ecstasy is not as bad as paralysis, it implies a pleasing, strong sensation, like electricity is supposed to bring to the economy. When doctors jolt a dying patient with current, does he feel ecstatic? Unfortunately, they are usually in coma when that happens, and cannot tell us whether the masanyalaze made them feel paralyzed or ecstatic. Still, the two could actually mean the same thing, or at least go hand in hand. Just look at very poor people with little or no economic activity. Or consider people in refugee camps. Their personal economies are paralyzed but at the same time they tend to engage more in ecstatic activities, evidenced by their faster rate of reproduction and what our grandfathers used to call the "diseases of the brave ones" more than settled, prosperous communities. Ecstasy, electricity, paralysis; synonymous?

Coal Power Plants Planned in Pakistan



Sindh is rich in natural sources, which would be exploited to improve the national economy.

The vast coal reserves in Sindh will be utilised to produce electricity and many such power plants will be set up over the next five years.

This was stated by Sindh Chief Minister Dr. Arbab Ghulam Rahim while presiding over a high-level meeting at the CM's House on May 22.

The meeting was held to discuss the next provincial budget.

The chief minister said that the province was rich in natural sources, which would be exploited to improve the national economy. He said that coal-based power plants would help end power shortage. The royalty against the coal would help strengthen the provincial economy alleviate poverty.

He said that some European companies were setting up oil refineries near Port Qasim and Dhabeji. The investors were also keen to set up power plants at Jamshoro and Keti Bander, according to him.

Dr. Arbab said that illegal encroachments within the city's limits and along the Super Highway would be removed, dawn.com said.

The meeting was told that 25,000 acres of government land along the highway had been retrieved from land-grabbers whereas bogus allotments of 86,000 acres of land in Thatta had been cancelled.

The chief minister stressed on improving standard of education in the province, and asked the officials concerned to conduct a survey of the small villages which were still without primary schools.

He noted that at present, the number of children not going to school was over two million. He directed the officials to take steps towards improving the condition of 41,215 government primary schools in Sindh and increase the number of middle schools.

The chief minister said that hefty fees of private schools were a permanent nuisance for parents of students. He asked education department officials to set up a joint committee of parents and academics to sort out the issue.

He said that model English-medium schools would be opened in every taluka of the province, and funds for them would be allocated in the next budget. He called for preparing a plan for the capacity-building of government schools' teachers.

The chief minister was of the view that if EDOs Education of all 23 districts took sincere efforts, there would be no reason why education standard in Sindh did not improve. He said that by improving the standard of 45,487 government schools in the province, the future of Sindh could be turned bright.

He ordered stern action against those using unfair means in examinations, saying he wanted total elimination of the 'copy culture'.

Dr. Arbab said that laying a network of uplift projects across the province was his mission. He directed officials to earmark funds for setting up model villages for fishermen at Manchhar Lake, Keenjhar Lake and Zero Point. He said that funds should also be tagged in the coming budgets for purchasing small boats and launches for fishermen.

He announced that a bridge would be constructed over the Indus River between Thatta and Tando Mohammad Khan to provide better travel facilities to the people of these areas.

The meeting was attended by chief secretary, senior BoR member, additional chief secretary (P&D), and secretaries of irrigation, agriculture, education, mineral development, local bodies, livestock, health and other departments.

Clinton Proposes Energy Revolution

Sen. Hillary Rodham Clinton on Tuesday called for a revolution in the way Americans think about energy, saying that the country needs to begin investing heavily in alternative fuels and conservation to break its reliance on foreign oil. The New York Democrat, a potential presidential candidate in 2008, proposed cutting US oil imports by half by the year 2025, principally through a \$50 billion government investment in the development of energy sources such as ethanol, wind and solar. But she also said that conservation measures, which helped the country work itself out of the last big energy crisis in the 1970s, were still an "important part of any sensible energy policy."

Dealing with the new energy crisis, "will take a well-funded, comprehensive approach with staying power," Clinton said in a 41-minute speech at the National Press Club, Democrat and Chronicle.com said. "We can't just point fingers and, sort of, place blame on anyone else; foreigners over there, oil companies over here. The ball is in our court. It is up to us to act and to act soon. It is going to require a virtual revolution in our thinking about energy and in the actions that must follow."

Clinton's speech was her latest effort to substantively stake out her positions on major issues--a tack her husband took before he ran for president in 1991. Last month, Clinton discussed her views on the economy in a 57-minute speech at the Economic Club of Chicago. But on Tuesday, she was also forced to deal with Iraq when two women protesting the war interrupted her speech. The protesters, who

yelled, "Stop the war," were dragged from the room, leaving Clinton to explain in a question-and-answer session that she did not regret voting for war but opposed the way the president had conducted the conflict. She said the United States could begin thinking about "making other decisions" about Iraq once an Iraqi government is "fully formed."

On energy policy, Clinton renewed her call for the creation of a "strategic energy fund" that would provide tax incentives used to spur development of alternative energy. When she first proposed the fund last fall, she said it could generate \$20 billion a year by requiring oil companies to contribute a portion of their "unanticipated profits" for the endeavor. On Tuesday, she said she was introducing legislation for a \$50 billion fund that would also be financed by the repeal of tax breaks that "oil companies have told us they don't need." The bill would also ensure that oil companies pay their fair share of royalties for drilling on public lands.

"Right now our tax policies are upside down," Clinton said. "We give large tax breaks for oil exploration far from our shores and limited tax breaks for installing biofuel (ethanol) pumps at American gas stations."

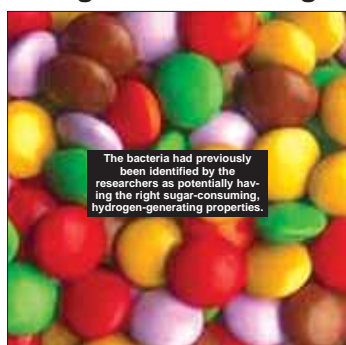
Her other energy goals include: Extending the production tax credit for generating electricity from wind and other renewable sources for 10 years. Doubling tax breaks for consumers who buy hybrid cars and clean-energy cars, and create a tax incentive for fleet owners to buy more energy-efficient vehicles.

Spending \$9 billion to set up and fund a national energy research agency.

Republicans said Clinton's energy agenda repackaged "old ideas" and would obstruct Bush's efforts to expand domestic oil production. They also cited her votes against oil drilling in the Arctic National Wildlife Refuge and the 2005 energy bill. "Senator Clinton's energy policy consists of a unique balancing act involving partisanship, political pandering and yesterday's mistakes," said Tracey Schmitt, press secretary for the Republican National Committee. "Voting against meaningful legislation that would increase domestic production while opposing a comprehensive energy bill is harmful enough, but adopting the energy policies of the 1970s is a price Americans cannot afford."

Candy-Munching Bacteria Prodigious Hydrogen Producers

Bioscientists at the University of Birmingham in the United Kingdom have demonstrated a reactor that uses hydrogen-producing bacteria and sugar waste to generate electricity via a fuel cell. The researchers involved say the technology could also be used to power hydrogen-fuelled vehicles. Interestingly, the project used waste products, in this case diluted nougat and caramel waste, from the confectionery industry as "food" for the bacteria. The bacteria had previously been identified by the researchers as potentially having the right



The bacteria had previously been identified by the researchers as potentially having the right sugar-consuming, hydrogen-generating properties.

sugar-consuming, hydrogen-generating properties. Once in the reactor, the bacteria con-

sumed the sugar, producing hydrogen and organic acids; a second type of bacteria was then

introduced into a second reactor to convert the organic acids into more hydrogen. The hydrogen was then fed to a fuel cell, in which it reacted with oxygen in the air to generate electricity, sciencegogo.com said. To keep the whole process "green", waste biomass left behind by the process was removed, coated with palladium and used as a catalyst in another project aimed at identifying ways of removing pollutants such as chromium and polychlorinated biphenyls (PCBs) from the environment. As well as energy and environmental benefits, the technique could provide the confectionery

industry (and potentially other foodstuff manufacturers) with a useful outlet for waste generated by their manufacturing processes. Much of this waste is currently disposed of in landfill sites. "Hydrogen offers huge potential as a carbon-free energy carrier," said lead researcher Lynne Macaskie, of the University of Birmingham's School of Biosciences. "Although only at its initial stages, we've demonstrated a hydrogen-producing, waste-reducing technology that, for example, might be scaled-up in 5-10 years' time for industrial electricity generation and waste treatment processes."