## NC

Prioritizing EP decreases hydroelectric production. **Kosnik 10** writes[[1]](#footnote-1)

**Hydro**electric **power**, or electricity generated by large turbines located at the bottom of reservoirs created from large dams, **has been** a **viable tech**nology since the late nineteenth century (Edwards 2003). At that time, when the industrial revolution was at its height and economic development of the nation was at center stage, the federal government’s official mandate was to encourage hydroelectric production in the United States. Competing demands for the services of the nation’s rivers toward more environmental ends did not begin to make inroads into official legislative expression until the late 1960s and early 1970s, after passage of legislation such as the National Environmental Policy Act (1969), the Clean Water Act (1972), and the Endangered Species Act (1973). Today, **the** Federal Energy Regulatory Commission (**FERC**), the agency in charge of hydropower regulation, **has a** clear **mandate to balance** both **power interests and environmental concerns**. Over the past 25 years, FERC has been struggling to interpret just how, in practice, to balance these competing interests **over one of the** nation’s **most important resources:** its **rivers**. FERC is able to affect this environmental protection/hydropower production trade-off when it issues licenses for hydropower dams. All nonfederal hydropower dams in the United States must be licensed every 30 to 50 years in order to legally operate. This licensing process is the only official opportunity during the lifetime of a dam for a complete review of its safety and operations. It is also the only opportunity for mandated revisions of its inherent energy/environmental operational trade-offs. For example, FERC could require dam owners to limit the flow of water through the dam’s turbines. This would reduce electricity production, but it would also help eliminate irregular rushes of water that cause stream bank erosion and damage to aquatic nesting sites. Other methods FERC could impose to help the riverine environment (such as fish ladders, modified turbines, etc.) similarly tend to negatively affect electricity production. **More environmental protection implies less hydroelectricity production**. In the end, when FERC issues a license mandating a certain level of environmental protection, it is implicitly choosing a certain tradeoff between environmental protection and hydropower production. What influences FERC’s choice?

Prioritizing hydropower in Pakistan solves Pakistan energy crisis.

**Khan 13** writes[[2]](#footnote-2)

**Hydropower is the cheapest way to generate electricity today** and hydroelectric power provides almost one-fifth of the world's electricity. Pakistan is, of course blessed with an abundance of renewable energy potential, but so far this remains unharnessed, except for a few large hydroelectric projects. After the construction of the Tarbela Dam, not a single big hydropower project has been carried out during the last 40 years, except Ghazi Barotha. According to the Water and Power Development Authority of **Pakistan** (WAPDA), two-thirds of the country’s electricity is today produced from fossil fuels, and just one-third from hydro. In 2001, WAPDA **identified** 22 **sites for** launching **hydropower projects to meet** the ever-increasing **demand for cheap power**. It had indicated that about 15,074 megawatts could be generated on the completion of these projects (more than enough to meet our current energy shortfalls of around 6000 megawatts). These projects could also have met the water irrigation requirements for the growing agriculture sector. However, these projects failed to materialise and earlier this year, the Senate Standing Committee on Water and Power was informed that while WAPDA had completed the designs and plans of several hydropower projects, the critical financial position of the government was not allowing for the implementation of these projects. The only major hydropower project under construction that is due to be completed anytime soon (2016) is the Neelum Jehlum hydropower project (969 megawatts). Medium sized hydro projects like the Neelum Jhelum need to be speeded up since they can make important contributions to solving the energy emergency the country currently faces. As for the large Diamer Basha Dam, (which could add as much as 4,500 megawatts to the national grid and provide water storage capacity of 6.7 million acre feet), the Committee was informed that while the paper work was complete, it still required financing and WAPDA is looking into various sources of financing. According to **water and energy expert** Arshad **Abbasi** who is currently working with the Sustainable Development Policy Institute in Islamabad, “during the previous regime, it seems all hydropower projects were kept on the back burner with more focus towards thermal power plants and importing electricity”. In his view, had the 850 megawatts Munda Dam on the Swat River been developed, the devastating 2010 flood could have been averted and billions of dollars saved in damages. He also pointed out that the technically viable 1410 megawatts ‘Tarbela Dam Extension-4’ is still not ready. This 800 million USD project was scheduled to be ready in December 2006, but it could not be completed “on account of criminal negligence of some officials of the Ministry and former Chairman WAPDA”. In his view, both projects can still be completed soon if the current government headed by Nawaz Sharif takes note and gives them top priority. He **pointed out that “Developing our** own **hydropower is the most important thing for the country”**. While large hydropower projects require a lot of funding and time to be built, what about smaller projects? Many international energy experts like Carl Pope point out that **micro-hydro can be deployed** to capacity **in Pakistan’s north to overcome** the **energy crisis** in that region. In his view, “**Pakistan’s northern areas has phenomenal numbers of micro-hydro locations**, which can be developed with locally supportable small scale systems, with very low costs and ease of local maintenance. In certain districts, hundreds of projects have been developed by local communities once the technology has been demonstrated; in others lacking these demonstration efforts, no progress has been made”. With help from the government’s Alternative Energy Development Board, micro-hydropower project development has enjoyed the most attention within the last couple of years, resulting in considerable funds being allocated by international donor institutions such as the European Union (EU). This has led to the sharp increase in installed capacities of this technology in the country (including Punjab and KPK where hydropower projects have been installed in rivers, streams and canals, ranging from under 1 megawatts to 20 megawatts). According to the AEDB’s recent report, “The support being provided by the international donor community has resulted in the initiation of ‘fast track’ projects by local development organisations such as the Sarhad Rural Support Programme (SRSP), Pakistan Poverty Alleviation Fund (PPAF) and Aga Khan Rural Support Programme (AKRSP).” Here is a chart showing the total installed capacity of Micro Hydropower in Pakistan: Just recently, Pakistan has also completed its first hydropower project under the United Nations Clean Development Mechanism (CDM) that the government hopes will act as a catalyst to attract foreign investment. The 84 megawatts, New Bong Escape project was inaugurated by Prime Minister Nawaz Sharif last week. The New Bong Escape project has been built in Mirpur District in Azad Jammu Kashmir and uses “run of river” construction, with a semi-submerged powerhouse containing four sets of turbines and generators rather than a dam. It is located about 8 kilometers downstream from Mangla Dam (a major reservoir and itself a 1,000 MW hydropower generator which was commissioned in 1967). The 217 million USD new power plant, co-funded by the Asian Development Bank and the Islamic Development Bank, was the country’s first hydropower scheme to be registered with the UN Framework Convention on Climate Change (UNFCCC) as a CDM project, in January 2009. According to Larib Energy Limited, the project developer, it will reduce Pakistan’s carbon dioxide emissions by 219,000 tonnes annually by supplanting fossil fuel-fired power plants. The CDM assists developing countries in implementing project activities that reduce greenhouse gas emissions in return for generating carbon credit Certified Emission Reductions (CERs). The CERs generated by the CDM project activities can be used by developed countries as credits to meet their emission targets under the Kyoto Protocol (which was signed and ratified by Pakistan on January 11, 2005). No one denies the need for greater electric capacity in Pakistan but it seems that **Pakistan’s vast hydropower** potential **will remain untapped unless the government gives it top priority**. To secure the financing for the larger projects, the government has to somehow bring in much needed foreign investment to this sector despite the prevailing security concerns.

Electricity shortages cause Pakistan econ decline which causes terrorism.

**Northam 12** writes[[3]](#footnote-3)

If you want to gain a good insight into Pakistan's economic situation, just look at a few of the country's newspaper headlines on any given day. The language says it all: prices soar, stocks plunge, budget deficit swells, foreign investment evaporates — and the list goes on. Now, analysts are increasingly worried that the faltering economy could join Pakistan's pervasive insurgency and repeated political upheavals as another serious threat to the country's stability. **A recent report issued at the World Economic Forum says Pakistan ranks in the bottom 20** out of the world's **economies**. Nadeem Ul Haque, deputy chairman of the state Planning Commission, says nobody really wants to talk about economic reform, or draw up new fiscal policies. "The debate is always so charged with religion and geopolitics and war on terror, just talking about economics takes second place — in fact fifth place, in fact seventh place, 10th place," Haque says. "Nobody really wants to talk about economics." And while the government avoids making difficult economic policy decisions, key industries in Pakistan are taking a hit. A Target For Extremist Recruitment At the Sitara textile mill in the eastern city of Faisalabad, huge panels of cotton are imprinted with pictures of Spider-Man and Justin Bieber. They will be turned into duvet covers and sent to the U.S., says the plant's general manager, Ashfaq Ahmad. He says his mill is the only one in Pakistan that has two machines for doing flatbed printing — but only one of them is running. The other is closed, he says, because of a gas shutdown. Ahmad says **serious** gas and **electricity shortages mean that** this and other **plants** in Faisalabad **can only operate four days a week. Power outages can last up to six hours a day**. Rehan Naseem Bharara, vice president of Faisalabad's Chamber of Commerce, says many textile factories have shut down, and another just recently reduced staff. "They had about 13,000 people in their factory three years back, but now only 3,400 people are working," Bharara says. He says the **cutbacks have had a huge impact on the community**, especially **the jobless**, who **become an "easy target for** ... **people who promote terror**ism in this country." Western analysts say **the decaying economy is as much of a threat to Pakistan's stability as the Taliban** because widespread poverty and unemployment could lead to more political instability and an increase in extremism. Security forces fired above a large crowd during recent demonstrations over an anti-Islam video. Most of those involved were young people. Pakistan has one of the world's fastest-growing populations, and job prospects for young people are growing dimmer.

Terrorism risks Pakistan collapse which triggers multiple scenarios for nuclear war.

**Pitt 9**[[4]](#footnote-4)

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But a suicide bomber in Pakistan rammed a car packed with explosives into a jeep filled with troops today, killing five and wounding as many as 21, including several children who were waiting for a ride to school. Residents of the region where the attack took place are fleeing in terror as gunfire rings out around them, and government forces have been unable to quell the violence. Two regional government officials were beheaded by militants in retaliation for the killing of other militants by government forces. As familiar as this sounds, it did not take place where we have come to expect such terrible events. This, unfortunately, is a whole new ballgame. It is part of another conflict that is brewing, one which puts what is happening in Iraq and Afghanistan in deep shade, and which represents a grave and growing threat to us all. **Pakistan is now trembling on the edge of violent chaos**, and is doing so **with nuclear weapons** in its hip pocket, right **in** the middle of **one of the most dangerous neighborhoods in the world.** The situation in brief: Pakistan for years has been a nation in turmoil, run by a shaky government supported by a corrupted system, dominated by a blatantly criminal security service, and threatened by a large fundamentalist Islamic population with deep ties to the Taliban in Afghanistan. All this is piled atop an ongoing standoff with neighboring India that has been the center of political gravity in the region for more than half a century. The fact that **Pakistan,** and **India,** and **Russia, and China all possess nuclear weapons** and share the same space means any ongoing or **escalating violence** over there **has** the real **potential to crack open the very gates of Hell** itself. Recently, the Taliban made a military push into the northwest Pakistani region around the Swat Valley. According to a recent Reuters report: The (Pakistani) army deployed troops in Swat in October 2007 and used artillery and gunship helicopters to reassert control. But insecurity mounted after a civilian government came to power last year and tried to reach a negotiated settlement. A peace accord fell apart in May 2008. After that, hundreds — including soldiers, militants and civilians — died in battles. Militants unleashed a reign of terror, killing and beheading politicians, singers, soldiers and opponents. They banned female education and destroyed nearly 200 girls' schools. About 1,200 people were killed since late 2007 and 250,000 to 500,000 fled, leaving the militants in virtual control. Pakistan offered on February 16 to introduce Islamic law in the Swat valley and neighboring areas in a bid to take the steam out of the insurgency. The militants announced an indefinite cease-fire after the army said it was halting operations in the region. President Asif Ali Zardari signed a regulation imposing sharia in the area last month. But the Taliban refused to give up their guns and pushed into Buner and another district adjacent to Swat, intent on spreading their rule. The United States, already embroiled in a war against Taliban forces in Afghanistan, must now face the possibility that **Pakistan could collapse under the mounting threat of Taliban forces** there. Military and diplomatic advisers to President Obama, uncertain how best to proceed, now face one of the great nightmare scenarios of our time. "Recent militant gains in Pakistan," reported The New York Times on Monday, "have so alarmed the White House that the national security adviser, Gen. James L. Jones, described the situation as 'one of the very most serious problems we face.'" "Security was deteriorating rapidly," reported The Washington Post on Monday, "particularly in the mountains along the Afghan border that harbor al-Qaeda and the Taliban, intelligence chiefs reported, and there were signs that those groups were working with indigenous extremists in Pakistan's populous Punjabi heartland. The Pakistani government was mired in political bickering. The army, still fixated on its historical adversary India, remained ill-equipped and unwilling to throw its full weight into the counterinsurgency fight. But despite the threat the intelligence conveyed, Obama has only limited options for dealing with it. Anti-American feeling in Pakistan is high, and a U.S. combat presence is prohibited. The United States is fighting Pakistan-based extremists by proxy, through an army over which it has little control, in alliance with a government in which it has little confidence." It is believed **Pakistan** is currently in **possess**ion of **between 60 and 100 nuclear weapons**. Because Pakistan's stability is threatened by the wide swath of its population that shares ethnic, cultural and religious connections to the fundamentalist Islamic populace of Afghanistan, fears over what could happen to those nuclear weapons if the Pakistani government collapses are very real. "**As the** insurgency of the **Taliban and Al Qaeda spreads in Pakistan,**" reported the Times last week, "senior American **officials** say they **are** increasingly **concerned about new vulnerabilities for Pakistan's nuclear arsenal, including the potential for militants to snatch a weapon in transport or** to insert **sympathizers in**to laboratories or fuel-production **facilities.** In public, the administration has only hinted at those concerns, repeating the formulation that the Bush administration used: that it has faith in the Pakistani Army. But that cooperation, according to officials who would not speak for attribution because of the sensitivity surrounding the exchanges between Washington and Islamabad, has been sharply limited when the subject has turned to the vulnerabilities in the Pakistani nuclear infrastructure." "The prospect of turmoil in Pakistan sends shivers up the spines of those U.S. officials charged with keeping tabs on foreign nuclear weapons," reported Time Magazine last month. "Pakistan is thought to possess about 100 — the U.S. isn't sure of the total, and may not know where all of them are. Still, if Pakistan collapses, the U.S. military is primed to enter the country and secure as many of those weapons as it can, according to U.S. officials. Pakistani officials insist their personnel safeguards are stringent, but a sleeper cell could cause big trouble, U.S. officials say." In other words, a shaky Pakistan spells trouble for everyone, especially if America loses the footrace to secure those weapons in the event of the worst-case scenario. If Pakistani militants ever succeed in toppling the government, several very dangerous events could happen at once. **Nuclear-armed India could be galvanized into military action** of some kind, **as could nuclear**-armed **China or nuclear**-armed **Russia.** If the Pakistani government does fall, and all those Pakistani nukes are not immediately accounted for and secured, the specter (or reality) of **loose nukes** falling **in**to **the hands of terrorist organizations could place the entire world on a collision course with unimaginable disaster.** We have all been paying a great deal of attention to Iraq and Afghanistan, and rightly so. The developing situation in Pakistan, however, needs to be placed immediately on the front burner. The Obama administration appears to be gravely serious about addressing the situation. So should we all.

# Frontlines

## AT Alt Causes

Pakistan’s energy crisis is the largest single drain on its economy.

**Aftab 14** writes[[5]](#footnote-5)

**The energy crisis is the largest single drain on Pakistan’s economy**. This crisis stems from a fuel mix transformation initiated two decades ago, when power generation came to rely more on imported furnace oil than hydropower. The resultant **increased power** generation **costs, coupled with** the **high** proportion of **line losses, have led to the need to increase tariffs, while causing losses to power** generation, transmission and distribution **companies. This** in turn **has given rise to** the phenomenon of **circular debt in the energy sector, whereby slippages in** the **payment of bill** (particularly on the part of public institutions) **trigger a chain of delayed payments** for imported furnace oil, natural gas or other inputs to the thermal generation system, which in turn hamper the operation of the power plants and result in less than optimum capacity usage. In addition, **the energy crisis is a significant drain on the government’s resources, with energy subsidies taking up a substantial part of the** federal **budget**. Under an International Monetary Fund agreement of September 2013 the government is committed to clearing the circular debt, adjusting tariffs to improve resource allocation and encourage conservation, and implementing fuel policies aimed at ensuring natural gas supplies to power plants.

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2. Rina Saeed Khan (staff writer). “The untapped blessing of hydropower.” DAWN. August 23rd, 2013. http://www.dawn.com/news/1031357/the-untapped-blessing-of-hydropower [↑](#footnote-ref-2)
3. Jackie Northam (Foreign Affairs correspondent for NPR news, has traveled to Pakistan many times, former NPR National Security Correspondent, has received multiple journalism awards, including Associated Press awards, regional Edward R. Murrow awards, and was part of an NPR team journalists that won an Alfred I. duPont-Columbia University Award). “Faltering Economy Threatens Pakistan’s Stability.” NPR. October 4th, 2012. http://www.npr.org/2012/10/04/162232742/faltering-economy-threatens-pakistans-stability [↑](#footnote-ref-3)
4. 5/8/09, William Pitt (a New York Times and internationally bestselling author of two books: "War on Iraq: What Team Bush Doesn't Want You to Know" and "The Greatest Sedition Is Silence"), “Unstable Pakistan Threatens the World,” http://www.arabamericannews.com/news/index.php?mod=article&cat=commentary&article=2183 [↑](#footnote-ref-4)
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