

GREENPEACE



# EDISON OUT

The Struggle to Stop Coal Fired Power Plants in Bo Nok and Ban Krut, Thailand

[www.cleanenergynow.org](http://www.cleanenergynow.org)



Photo by Jeremiah Holland

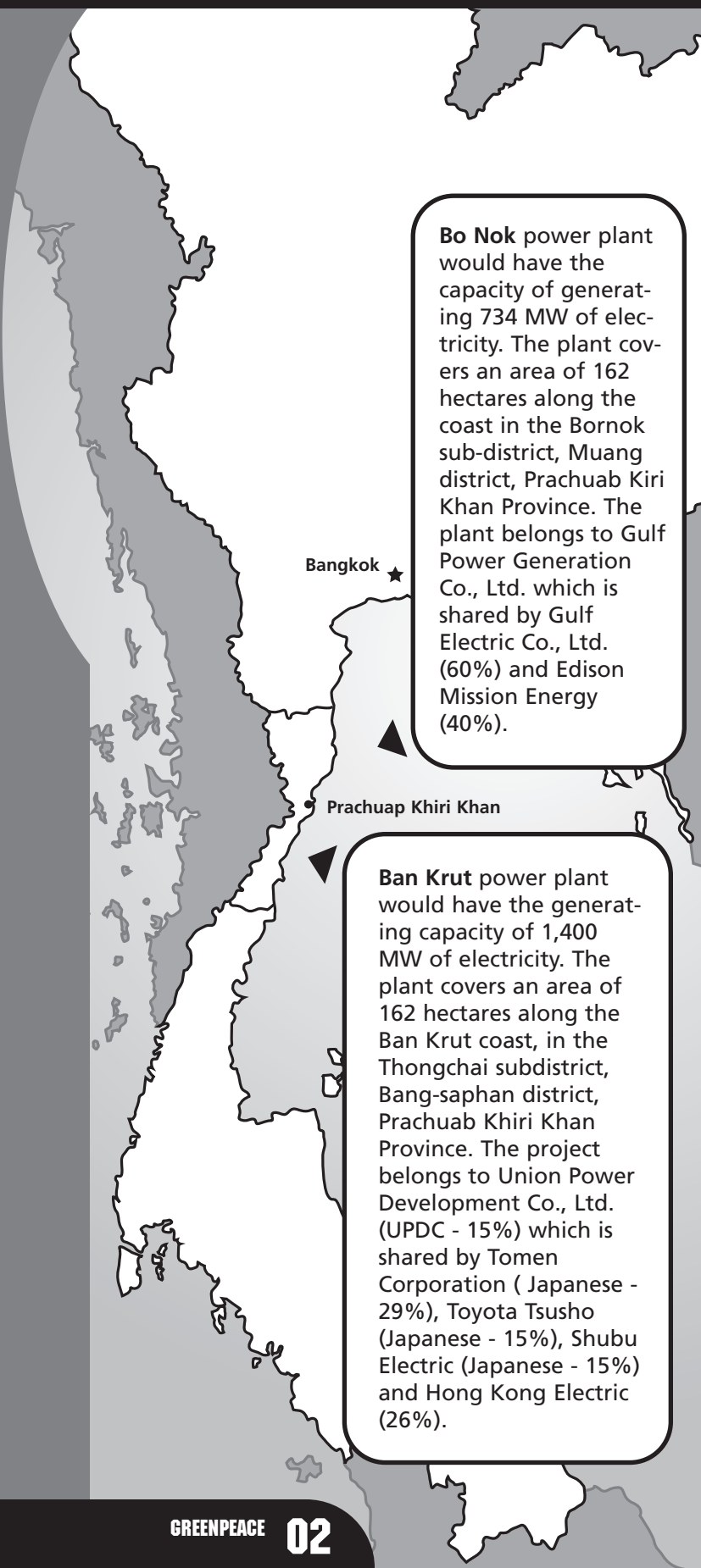
**Imagine if an electricity company tried to build a dirty coal fired power plant on a rural beach near a national park in, say, southern California in 2002.**

Now, imagine if that coastal area was a breeding ground for whales and dolphins. Most likely, the company would be laughed out of the state.

But that's exactly what one Southern Californian company, Edison, is trying to do in Thailand against the bitter objections of local farmers and fisherfolk.

The battle over two-coal plants proposed by Edison and some corporate friends has emerged as one of Thailand's most intense and longest running struggles.

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**Bo Nok** power plant would have the capacity of generating 734 MW of electricity. The plant covers an area of 162 hectares along the coast in the Bornok sub-district, Muang district, Prachuab Kiri Khan Province. The plant belongs to Gulf Power Generation Co., Ltd. which is shared by Gulf Electric Co., Ltd. (60%) and Edison Mission Energy (40%).

**Ban Krut** power plant would have the generating capacity of 1,400 MW of electricity. The plant covers an area of 162 hectares along the Ban Krut coast, in the Thongchai subdistrict, Bang-saphan district, Prachuab Khiri Khan Province. The project belongs to Union Power Development Co., Ltd. (UPDC - 15%) which is shared by Tomen Corporation (Japanese - 29%), Toyota Tsusho (Japanese - 15%), Shubu Electric (Japanese - 15%) and Hong Kong Electric (26%).

The struggle against Edison is a fight for human rights and environmental protection from the many negative impacts of coal plants, not least amongst them global warming.

At issue is a proposal to build two huge coal-fired power plants in two villages on the Gulf of Thailand, Ban Krut and Bo Nok. The question as to whether these plants can be built has gathered steam over the last seven years as communities in the area have organized a solid resistance campaign. In it, despite often harsh repression, they have won support from around the world and delayed the plants.

Edison International, a U.S. corporation, is at the center of a consortium pushing this model of power generation on to the community and government of Thailand. Villagers say that the plant developers represent foreign multinationals seeking to practice gross double standards at the expense of people and places on the other side of the world. If the Edison Consortium has its way it will have serious negative affects including the following:

- uproot a sustainable community that is opposed to such industrial development
- create a pollution problem that will despoil local ecosystems and public health
- grossly contribute to climate change through carbon dioxide emissions, and
- reduce the potential for Thailand to meet its electricity with clean energy.

Greenpeace aims to expose the hypocrisy of Edison in pursuing this power plant over the wishes of the local community, and its failure to address the climate change potential of its plans, which will be at the expense of us all. The deeper that emerging economies like that of Thailand become embedded in the dirty energy pathway, the worse global warming will be in years to come. The good news is that there are viable alternatives to fossil fuels in the Thai setting: namely wind, solar and biomass-power generation.

But Edison and its partners want only to bring old King Coal to Thailand. The technology that the developers would use at both the plants would never meet the environmental and social protection standards in California, homestate of the Edison Corporation. Yet the companies involved would gladly spend two billion dollars on building these plants that would cloud the air, sully the water and choke the children of Thailand.





## THE TOP FIVE INVESTORS IN EDISON INTERNATIONAL

CAPITAL RESEARCH AND MANAGEMENT CO., LOS ANGELES

STATE STREET CORPORATION, BOSTON

JP MORGAN CHASE AND CO., NEW YORK

CAPITAL GUARDIAN TRUST COMPANY, LOS ANGELES

PUTNAM INVESTMENT MANAGEMENT INC., BOSTON

**Edison International** is a holding company, headquartered in Southern California. It is the “ultimate” parent company of Edison Mission Energy, which owns the 40% stake in the proposed Bo Nok power plant in Thailand. EIX, as Edison International is known on the stock exchange, is also infamous as the parent of Southern California Edison. Its total assets amount to U.S.\$36.9 billion according to the company’s most recent tax filings.

**Southern California Edison** is an embattled electricity utility in the Los Angeles area of California that buys and sells power. SCE, the acronym by which Edison is best known throughout the United States, services 11 million customers and is literally a household name in central and coastal Southern California. It is virtually bankrupt at the time of writing, and has sought state support—a bailout—to continue its services in California.

**Edison Mission Energy** is a global power generating company that is wholly-owned by Edison International. EME has 76 assets, with a net generating capacity of nearly 19,000 megawatts. Projects span the globe, from Australia, Italy and New Zealand, to Thailand, Puerto Rico and the Philippines. It also owns significant interests in coal mines in Australia and Indonesia—preferred sources for the Bo Nok power plant.

There are other companies under the umbrella of Edison International: Edison Capital provides capital and financial services for global power and infrastructure projects, Edison Enterprises is the company’s retail subsidiary, and Edison O&M Services provides power plants with operations and maintenance services.

**Edison Power Generated from Coal: 61.9 %**  
**Edison Generated from other sources: 38.1%**

## Global Highlights:

**Doing Business With Dictators:** Located in East Java, Indonesia, Edison’s Paiton project consists of two units, each producing 615 megawatts of electricity. It is backed in large part by taxpayer money: the U.S. Export-Import Bank has helped to finance U.S. equipment and services exports to Paiton worth more than \$500 million, while the Export-Import Bank of Japan is contributing \$900 million, with other funding from the U.S. Overseas Private Investment Corporation (OPIC). On October 7, 1999, Indonesia’s national power company filed a lawsuit against Paiton to nullify the 30-year power purchase agreement signed by the previous management of the state company in 1994, under the allegedly corrupt administration of former president Suharto.<sup>1</sup>

**Polluting Our National Landmarks:** If you’ve visited the Grand Canyon and had trouble seeing it, it was possibly because of air pollution from Edison’s Mojave power plant. Located in Laughlin, Nevada, the 1,580 megawatt plant burns a slurry, or soup, of powdered coal and water piped 275 miles from the highly controversial Black Mesa mine. The Mojave power station is said by some to be the largest single source of greenhouse gas emissions in North America, and its torrent of air pollution halves visibility in the Grand Canyon. It burns coal with no pollution controls for mercury, smog, or acid rain. The only coal slurry line in the U.S., it draws 3 million gallons of ancient water—the U.S. Geological Survey estimates that it is 10,000 to 35,000 years old—each day from an aquifer that is one of the few sources of water in that region of the U.S.A.<sup>2</sup>



**1995** The first protest against the emerging threat of power plants drew 4,000 people.



**1997** Love Bo Nok, a grassroots power plant opposition group, forms after confirmation that a coal-fired power plant could be built in the area—instead of the golf course most villagers expected.<sup>3</sup>

**May 1997** The Thai Government approves Edison group's Environmental Impact Assessment (EIA) despite major shortcomings. Critics say the report does not adequately deal with threats to whales and dolphins, among other things.<sup>4</sup>



**June 1997** Villagers gather at a local Buddhist temple to protest the plants.<sup>5</sup>

**August 20, 1997** Opponents file a complaint with the Human Rights Committee of the Thailand House of Representatives.<sup>6</sup>

**December 1997** The Edison consortium signs power purchase agreement contracts with the Thai government.<sup>7</sup>

**August 17, 1998** a coal-fired power plant in Mae Moh, elsewhere in Thailand, is found to be leaking toxic gases. Hundreds are hospitalized with respiratory problems.<sup>8</sup>

**December 8, 1998** Thousands blockade Thailand's Southern Highway in protests against the power plants.<sup>9</sup>

**February 1999** Edison group runs one of a number of full-page ads in Thai newspapers aimed at improving its public image. The ads carry the slogan "We care about every life in the community". The company spends more than \$1.3 million on advertising and public relations.<sup>10</sup>



**July 1999** Under pressure from US and Thai NGOs, the Export-Import Bank of the United States officially withdraws Bo Nok from funding consideration.<sup>11</sup>

**September 10-12, 1999** The first public hearing on the Prachuap plants are held, years after they are approved. Opponents boycott the hearing, demanding that the Government revoke the plant approvals and make the power purchase contracts public.<sup>12</sup>



**September 23, 1999** The U.S. Ambassador to Thailand, Richard Hecklinger, is accused of trying to influence the Thai government after he said the delay in plant construction could jeopardize the investment climate in Thailand.<sup>13</sup>

**October 12, 2001** Bo Nok villagers assault a company survey team researching whales in the area. Villagers say they thought the company was trying to poison the whales.<sup>14</sup>

**December 7, 2001** Greenpeace urges the government to pull the plug on the proposed coal-fired power plants in the Prachuab province and instead focus the country's attention on cleaner energy sources.<sup>15</sup>

**December 2001** A nationally televised public debate is held on Thailand's energy demand, between Thailand's National Energy Policy Office and power plant critics.<sup>16</sup>

**January 2002** Five hundred and thirty three academics sign a petition that calls on the government to review the contracts for the Prachuap plants. They say the projects represent an example of "policy-based corruption" involving a group of government officials and investors.<sup>17</sup>

**January 24, 2002** Thousands gather in protest as Prime Minister Thaksin Shinawarat visits the site of both plants. He promises a decision on the plants by mid-April.<sup>18</sup>





**On January 24, 2002**, thousands of local villagers gathered on the beach at Bo Nok in Thailand's Prachuap Khiri Khan province for a visit by Thai Prime Minister Thaksin Shinawatra, who had come to tour the site of the Edison Consortium's proposed coal-fired plant.<sup>19</sup> Although the protest was peaceful, some opponents had a clear warning for the Prime Minister and the Edison consortium: "You build, we burn".

Greenpeace does not support property damage, but the protesters' slogan reveals how contentious the 7-year battle over the two proposed coal-fired power plants in Prachuap Khiri Khan has become. It is also a clear signal for the California-based company—Edison Mission Energy, which owns 40 percent of one project<sup>20</sup>—that is the cause for so much consternation. Building this plant would be a bad business decision. It should be a blinding wake up call for anyone investing in Edison: get out while you can.

After touring both plant sites and looking at whale bones displayed by local villagers—a symbol of the rich marine ecosystem threatened by the project—the Prime Minister said he would make a final decision on the plants by April 13, the traditional Thai new year.<sup>21</sup> So even though the government has already granted the necessary licenses and signed long term power contracts with the Edison consortium, a potent grassroots opposition campaign has succeeding in stalling the project—at least for now.

## Build up to the Stand Off

When large amounts of land started changing hands around the Bo Nok sub-district in 1995, locals were told that developers were planning a new golf course and resort.<sup>22</sup> By the time residents found out about the coal-fired plant slated for the site, it was practically a done deal: the government had already endorsed the project and before long entered into long-term power contracts with the Edison group for years to come.

Villagers were immediately suspicious of the project, having heard horror stories about the infamous coal-fired power plant complex in Mae Moh, a village in the northern Thai province of Lampang. In October 1992, the Mae Moh plant started leaking toxic gases, killing cattle and sending more than 4,000 people to seek medical attention. Despite the installation of pollution mitigation equipment, the plants leaked again in 1998, with similar results.<sup>23</sup>

"I just didn't believe the company and the government," says Amnvay Songying, a Bo Nok alooe vera farmer. "In the case of Mae Moh villagers have complained about pollution and health problems like asthma."





The Edison consortium soon adopted a divide-and-conquer strategy, movement leaders say. Anan Pongpattana-Sagul, principal of Ban Nong Pulok School, organized a group of teachers to examine the details of the project. But after the company paid for some of the teachers to take a trip to see coal-fired power plants in Mae Moh and in the United States, many of them dropped their opposition. Mr Anan said, "I knew that it was the company's trick to buy us".<sup>24</sup>

Despite the company's efforts, local opposition grew steadily among the community of fishers, farmers, and merchants. Villagers sent dozens of letters to federal and local authorities, staged demonstrations, and attracted widespread media attention.

### Crackdown

In December 1998, tired of being ignored, thousands of people rallied in front of the Prachuap Provincial Hall. After officials failed to meet with them, the group proceeded to block the Southern Highway, the main route between Bangkok and the south of Thailand. Although the gathering was peaceful, riot police were sent in with trucks to break up the crowd, injuring 25 people. Even with the crackdown the protest lasted until the Deputy Interior Minister promised villagers that the plants would not be built as long as he is in office.<sup>25</sup>

It was only then that the government agreed to hold public hearings on the plants. But fearing their participation would legitimize a corrupt process, opponents boycotted the September 1999 hearings, demanding that the Government first revoke the plant permits and make the power contracts available to the public. Hundreds of protesters registered their objections by gathering outside of the hearing room in protest.<sup>26</sup>

Charoen Wat-aksorn, 34, a pineapple merchant and leader of the opposition movement, says that the villagers have tried for years to get attention to their cause through political channels but that only radical grassroots organizing ensures they are heard. "It must be a large group of people or the threat of violence or the government won't listen," he said.

### Verging on Victory

The government appears to now be finally listening. The fact that the Prime Minister visited the area of the plants in January 2002 was a milestone for the movement. Before it, in December, the Senate committee on Environment urged the government to relocate the two power plants to avoid "another riot".<sup>27</sup> But tensions are still running high and will not abate until the proposed plants are scrapped.

Pressure on the government to do this has been growing in recent months. In January, 533 leading Thai academics signed a petition calling on the government to abandon the two projects and to set up an independent body to review the contracts, which critics suspect gave the companies a sweetheart deal.<sup>28</sup> The petition made front page news in the leading Thai newspapers. Meanwhile, the Student Confederation of Thailand also launched a petition campaign in opposition to the plants.<sup>29</sup>



When a researcher from Thailand's Science Ministry recently reported the "discovery" of whales off the coast of Bo Nok, local fisherman Wirot Pongnoi wasn't surprised. He says he has seen whales feeding off the coast of Bo Nok since he was a kid. "We did not make a big deal out of it, because we just thought whales were common in the gulf," says the 46-year old Pongnoi.

These days, the Bryde's whale has become a symbol for the movement against the Edison group's power plant at Bo Nok, and for good reason. The endangered whales depend on the rich marine life in the area, just as Pongnoi and his fellow fisherman do for their livelihood. The developers maintain their coal-fired plant will be whale-friendly. But the existence of whales in the area was not even mentioned in the Edison Consortium's Environmental Impact Assessment. And according to a government report, coal-ash from the power plants could pose a significant threat to the whales.

Besides whales, the area is habitat to more than 190 species of fish and several species of dolphin. The Science Ministry's investigation also confirmed many of the local villagers' worst fears about the project. Among other things, it determined that the plants' turbines could draw in an estimated 550 minnows

per minute or some 578 million young fish per year, killing virtually all of them and severely affecting the marine food chain.

"That would affect the marine ecosystem severely, and this was not taken into consideration in either of the EIA reports for the two projects," said Suphavit Piamphongsarn, head of the ministry's investigation committee. "This figure we have is the minimum. It's possible that the real impact would be more."

The plant's cooling system will pump hot wastewater back into the sea, further endangering marine life. Thorn Thamrongnawaswas of Kasetsart University, told the Bangkok Post that the Bo Nok and Ban Krut power plants would destroy 10 billion fish over the plants 25 year operational lifespan.

Fishermen are also concerned about plans to build a 2 mile-long pier, which they say will obstruct their boats and nets. The 330,000 cubic metres of ash produced by the plant would be stored within 50 feet of a canal used by local fisherman every day. To make matters worse, debris would be dumped into the ocean during construction.

The threat to the local fishery and coastal biodiversity are just some of the plant's worst social and environmental impacts.





#### Other impacts include:

- **Loss of farming income:** For generations, farmers in Bo Nok have grown coconuts and pineapples, among other crops. Acid rain caused by the emission of sulphur dioxide, and ash, could pollute the land and waterways contaminating their crops and lowering yields. This has been the experience of farmers near the Mae Moh plant in northern Thailand, where sulfur dioxide releases have damaged rice fields, according to the Thai green group, Terra.
- **Damage to nearby wetlands:** The project poses a threat to nearby Sam Roi Yot National Park, a wetland park that is home to more than 200 species.<sup>30</sup> The Park has been nominated as a wetland of international importance under the Ramsar Convention, a global environmental treaty dealing with wetland preservation. The Environmental Impact Assessment conceded that sulphur dioxide from the plant will drift over the wetlands, which scientists say could harm the wetlands and erode the coastal limestone cliffs in the Sam Roi Yot National Park.
- **Threats to human health:** When asked why they doubt the company's safety claims, opponents of the plant frequently point to the case of Mae Moh, a lignite-fired plant in Northern Thailand, which has released high levels of sulphur dioxide and caused 42,000 local people to suffer from breathing problems.<sup>31</sup> This is why coal power plants are effectively outlawed in California, the homestate of the proponent, Edison International (see p 12).
- **Climate Change:** Scientists, politicians and business leaders around the world acknowledge that humanity is causing global warming. Continued global warming will cause the melting of glaciers and the polar ice caps, rising oceans, droughts, massive flooding, coral bleaching and an increase in storm activity. Coal is the largest contributor of carbon dioxide of any of the major forms of electricity generation, and the single largest source of global warming gases.

As a result of these impacts, the costs for which are not "internalized" to the price paid for electricity by consumers but ultimately borne by the public, coal is significantly more expensive than power from natural gas or biomass, two other options in Thailand. Once the true cost of these "externalities"—the public health impacts, lower agricultural productivity and other impacts from pollution—are included, coal is a very expensive energy option. Wind power worldwide is competitive with coal even without these costs being internalized to the price.

The good news is that thanks to new, cleaner, renewable technologies, these coal plants are not even necessary. In Southeast Asia, Greenpeace is actively promoting policies and projects that favor energy generated by wind, solar technology and biomass-based power, the potential for which in Thailand is huge. A separate report on the clean energy now available to Thailand has been published by Greenpeace and is available from the website <http://www.cleanenergynow.org>

As the Thai government decides whether or not to approve the stalled power plants, the Prime Minister's office has ordered the state energy authority to investigate the power contracts with Edison and its partners, which one top official called "unjustified and suspicious".<sup>32</sup>

At issue are three amendments to the Edison plant's contract, which critics say put the Government at a disadvantage. Chaturon Chaisaeng, the Prime Minister's appointee in charge of energy policy, said he believed changes to the terms had been made in the 1990s that unduly favored the companies. Canceling the contracts was therefore among the options, he said.

"The contracts, at a preliminary glance, seem unfair to the government as it has to take all responsibilities even though errors have been made by the private sector," Mr Chaturon said.<sup>33</sup>

Two of the three amendments increased the "availability payments"—money transferred to power generators in exchange for making their generation capacity available, independently of whether energy is actually provided or not.

The National Energy Policy Office has claimed that canceling the two contracts will result in a hefty fine of more than 10 million baht. These costs, the government claims, will be passed on to electricity ratepayers.<sup>34</sup>

But Witoon Permpongsacharoen, from the Project for Ecological Recovery, said at a recent public debate that the government would be within its rights to scrap the projects without paying any compensation. There are many factors it could cite in annulling the contracts with the company, such as the 1997 economic crisis or the fact that the company has failed to demonstrate its financial readiness to implement construction, he said.<sup>35</sup>

Even if it is forced to pay the penalty, critics say, that might be cheaper than allowing the plants to proceed. According to an analysis by the Thai group AEPS, due to the "take-or-pay" nature of the power purchase agreements, consumers will have to pay for the Edison group's power whether it is needed or not. In addition, the government will save millions of baht required to build transmission facilities to transport the power to Bangkok. And given the potentially exorbitant social and environmental costs, 10 million baht may be a small price to pay.<sup>36</sup>



Edison and their partners have spent thousands on ads in Thai newspapers to greenwash their proposed coal power plants. These ones outline the supposed benefits of "clean coal".



# US embassy denies charge of meddling

## Envoy accused by power plant lobby

Comments 'amount to interference'

### Our Man in Bangkok the U.S. Ambassador Lobbies for Edison group

As if standing up to their own government and a major developer weren't enough, the Thai opponents of the Bo Nok power plant may have a third obstacle to overcome: pressure from the U.S. government.

On September 1999, the U.S. Ambassador to Thailand, Richard Hecklinger met with Savit Bhotiwihok, the then Minister of the Prime Minister's office in charge of energy policy of the country. In an interview after the meeting with a Thai newspaper, *The Nation*, the Prime Minister said Hecklinger described the United States government as "particularly concerned" by delays in the Bo Nok project. Hecklinger implied that the repercussions for Thailand could extend to other U.S. investment, according to Savit's interview with *The Nation* newspaper:

"The ambassador was also quoted as saying that while Thailand has the potential to become a centre for economic activity, problems and delays as in the Bo Nok project could erode the potential for investment. The delay in the public-hearing process could, he said, become an obstacle in the way of future investment."

Hecklinger's comments outraged grassroots groups, who charged the Ambassador with interfering in the country's internal affairs. A leading academic, Danai Kimpadanai, said: "This is pressure on the Thai government to approve the project's construction."<sup>37</sup>

The U.S. embassy responded to the criticism by saying it "has a duty to advocate U.S. business in the same way Thai embassies do in other countries."<sup>38</sup>



#### EXIM EXITS

The Edison Consortium had attempted to secure U.S. taxpayer financing for the Bo Nok plant. The Export-Import Bank of the United States—a taxpayer funded government agency devoted to corporate welfare—had been in discussions with the proponents about funding the Bo Nok project. But in the face of pressure from Thai activists and the U.S. environmental group Friends of the Earth, the ExIm Bank claimed in spring 1999 that it had officially withdrawn the project for funding consideration.<sup>39</sup>





Dear Shareholders\*

As you know, the past few years have been difficult for our company. California's power crisis pushed our utility, Southern California Edison, to the brink of bankruptcy. However, through a three-pronged strategy of creative accounting, blackout threats, and political juice, we succeeded in protecting the assets of our parent company while getting our ratepayers to bail out SCE. Here's a little of the history to remind you:

The California deregulation law required us to sell off most of our power plants in the state. But that was OK, for several reasons. First, we were able to sell them at above book value to deregulated companies. The law also forced taxpayers to bail us out for our bad nuclear investments. Meanwhile, we shifted billions from the utility to our parent company, to fund dividends and stock repurchases. We then went on a global shopping spree, snatching up old, polluting power plants throughout the world. The value proposition from all this change is that we no longer have to deal with California's annoying environmental laws. Now, most of the power we produce around the world is from coal, something we could never have gotten away with in the Golden State.

In 2000 the California power crisis hit. Wholesale power rates skyrocketed, and our utility started running up big debts. Some suggested that our parent company—which had siphoned off all the utility's profits—should help pay those bills. Instead, we jacked up rates by 40 percent. Then, we found a loophole in the law that allowed Edison International to say, for the purposes of paying off debts, that we had never heard of Southern California Edison, or even Southern California for that matter. Check out our cool website disclaimer on this very subject at [www.edison.com](http://www.edison.com)!

We figured that if we turned the lights out often enough, the state would bail out the utility. There was the little problem that, despite our friend Governor Davis' efforts, the California legislature refused to pay off our debts. So we had to bring in our lawyers and lobbyists to meet secretly with the state regulators, arranging a lucrative bailout that sticks our customers with the bill. This type of corporate strategy is what makes us an innovative leader in the industry as we move back to the future with coal worldwide.

Environmentalists have recently criticized some of our investment decisions. They ask, why are we building a coal-fired plant smack dab on a beach in a tranquil Thai fishing village, something we could never get away with in California? Answer: Because we can!

Make no mistake—Edison's environmental commitment remains as strong as ever; we spend millions of dollars every year crafting and communicating a green image. And those who doubt our commitment to the environment should talk to our CEO John Bryson, one of the founders of the Natural Resources Defense Council.

As long as we continue to pursue this strategy—gouging our consumers in California and foisting polluting power plants on developing countries—we believe that Edison International will have a bright and powerful future.

\* Although this is not Edison's real letter to its shareholders we think it should be.

# Unplugging Edison's PR Machine

## Myth #1:

### Unless the Plants Are Built, Thailand Will Run Out of Power

When the two coal-fired power plants slated for Prachuap Khiri Khan were first approved, the Thai economy was riding high and power use was projected to skyrocket. But with the devaluation of the Thai currency, the baht, in 1997 the country's economy went into a tailspin and has been in the doldrums ever since. Now, critics are questioning whether it now needs the additional power from the plants at all.

The National Energy Policy Office maintains that the country's reserve margin would drop to precarious levels if the plants are cancelled. But others contend that NEPO's demand forecasts are overly optimistic: In 1997, the state's "electricity load forecast panel" used an economic growth figure of 4.7% to predict energy demand and power plant investment for the following five years. In reality, economic growth has not exceeded 2%.<sup>40</sup>

## Myth #2:

### Coal is the Cheapest Alternative

When you add the environmental and social costs into the equation, coal suddenly becomes much more expensive. Even if Thailand's environmental laws are properly enforced, a coal-fired plant still emits more sulfur-dioxide, nitrous-oxide, carbon-dioxide, particulates and heavy metals than other types of power plants.<sup>41</sup> These pollutants have damaging health and environmental effects. Power from a renewable technology like biomass is actually about a third cheaper than that from coal once social and environmental costs are taken into account (see page 8 for internalization of costs).

## Myth #3:

### The Plants will use high quality "Clean Coal"

The Edison consortium claims that it will use "clean coal" technology. "Clean" or "Enviro-coal" is a misnomer: even the cleanest of these new technologies is still dirtier than natural gas, for example. And studies show that even the best "clean coal" technology has minimal effect on greenhouse gas emissions. Also, dangerous levels of air and water pollution have been recorded in areas burning so-called clean coal. And whether the coal is low in sulfur or not, coal mining often involves human rights violations.

The low sulfur coal for Bo Nok will be supplied by Indonesia's Adaro coal mine, which is partly owned by Edison. PT Adaro, located in the province of South Kalimantan, has come under protest since it opened by local residents who say dredging in the area had created dust problems and polluted water supplies. In September 1999, human rights and environmental activists in Indonesia called for a halt to all coal mining in the province at a protest rally outside their governor's office and the local assembly. They said coal mining brought suffering to local people and destroyed the environment.<sup>42</sup>

## Myth #4:

### Edison Could Build the Same Plant in California

The Edison group insists that the Bo Nok plant will employ the latest technology, minimizing its impacts on the environment. In response to questions from environmentalists and government officials, President Robert Driscoll, Edison Mission Energy senior vice president for Asia Pacific Region, has said that Bo Nok would use the same technology even if it were built in southern California.

But could such a plant really be built on Edison's home turf? No, according to Curtis Moore, energy expert and former counsel to the U.S. Senate Committee on Environment and Public Works. He says the emissions from the proposed plant would be many times above what would be allowed in California. For example, the Thai plant is expected to emit nitrogen oxides, which impacts lung function and can cause asthma attacks, at 170 parts per million. New California plants would be limited to 2.5 parts per million. "There is no doubt that the Thai plant greatly exceeds anything new or old that is retrofitted in California," says Moore.<sup>43</sup>

Thai environmental activist Ponglert Pongwanan accuses Edison of using an unethical double standard. "Why, if they can't build it in the United States, are they allowed to build it here in Thailand?" he asks.

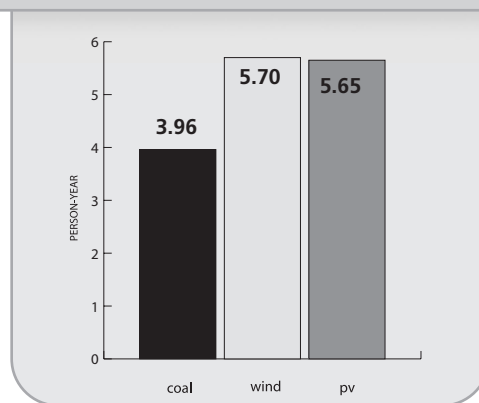
## Myth #5:

### Coal Power Plants will create Local Benefits

Companies argue that the construction of large-scale coal-fired power plants will bring about increased employment for local community members and also positive income for the local government from royalties and other proceeds from hosting power plants. These are rarely forthcoming, as the experience with multinational owned coal plants in the Philippines has shown. As far as employment goes, the project would indeed create some short-term construction jobs. But in the long run, coal is much less labor intensive than renewable energy technologies. A study, based on United States plants, found that both wind and photovoltaic plants provide 40% more employment than coal plants (see table).<sup>44</sup>

### Comparison of Coal, Wind and PV

(In person-years per \$1 million in cost over 10 years including capital and construction)



## Clean Energy Now! Campaign

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