

SUMMARY

Call to action:

End the electrocution of wildlife on Costa Rica's power lines

Every day, monkeys, kinkajous, sloths and other arboreal wildlife are brutally electrocuted on Costa Rica's electrical transmission system. Based on the hundreds of electrocuted animals reported to local wildlife rescue groups in 2008/2009, projected annual electrocution estimates in the thousands are reasonable. Escalating real estate development and the expansion of the electrical grid have intensified the problem.

These deaths and injuries are preventable: when power lines and transformer wires are shielded, animals are not harmed. Some shielded hardware has been installed in parts of the country, but the higher costs of this safe technology are considered by the power industry to be unaffordable, so it is not integrated into the industry's current business model.

Other methods to prevent electrocutions have been tried: monkey bridges, branch- and vine-cutting operations, and wider power line spacing. Although these methods can reduce the number of electrocutions, none is an effective, long-term solution.

Costa Rica lost half of its monkey population in the 12-year period between 1995 and 2007. Change in power industry policy and actual practice in the field is needed now. Working together, public and private institutions can solve the electrocution problem by calling for and contributing to the development of a comprehensive, strategic solution. Creative approaches to the cost issues, including new product sourcing and technology design, are critical. If shielded or buried power lines became a best practice - the default practice for the power industry - the suffering and death of arboreal wildlife on Costa Rica's electrical transmission system would end.

To respond to this call to action, email:
noelectrocutions@gmail.com



April, 2009 - During the week following the installation of this new transformer, three Howler Monkeys were electrocuted on the wires attached to it, including a mother carrying a young baby. Two of the monkeys died. The mother was rescued, but her hand was badly burnt. She tried to eat it off, so it had to be amputated. She is now healing. Her baby died three weeks later.

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Animals cannot understand that electrical power lines and transformers carry deadly current.

To monkeys, kinkajous, sloths, and other arboreal wildlife, power poles and lines look like the trees and vines that are their homes and highways. When an animal grasps a live electrical line while its feet or tail touches the parallel line beneath it, a deadly circuit is formed, and it is electrocuted.

Tree branches and vines touching a live line can also create this circuit. High-voltage wires connected to transformers, which sit at the top of electrical poles, are common sources of electrocutions as well. When gripped, these wires send searing current through the animal's body, burning fur, flesh, and internal organs.



Baby Howler Monkey. His fingers, jaws, arms, neck and chest were severely burned on a power line. His mother died from the electrocution.

Excruciating, gruesome, and often fatal, electrocutions are not occasional accidents. They occur daily to vulnerable climbing animals across Costa Rica. Thousands* of animals are brutally maimed or killed on the electrical transmission system each year.



Kinkajous, with their long prehensile tails, are frequent victims of electrocution.

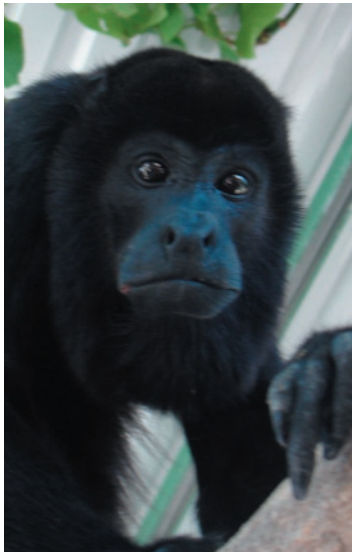
If an animal survives, the hands, feet, or tail that grabbed the line will be severely burned and become unusable. Some injured animals crawl back into the jungle, where—slowly and painfully—they die. Babies clinging to their electrocuted mothers can sometimes escape injury, but, as orphans, they are unlikely to survive.

No time to lose – wildlife populations in rapid decline

Electrocutions are not only cruel; they have become a significant factor in the decimation of the country's wildlife populations, which are also under threat from habitat loss and fragmentation caused by agricultural and real estate development, poaching, and pollution.

Results of a recent survey conducted by a team of Costa Rican biologists indicate that the country lost more than half of its monkey population in the 12 year period between 1995 and 2007. The most recent State of the Nation report declares the country's four primary monkey species to be in a critical state.

*No official agency is counting, but based on the hundreds of electrocutions reported to local wildlife clinics and sanctuaries in 2008/2009, projections in the thousands are reasonable.



Rescued electrocution victim. Some of this Howler Monkey's digits had to be amputated, but he has healed and may eventually be reintroduced to the wild.

Although the threat of habitat loss is broadly publicized and understood, the power line electrocutions that kill and maim arboreal wildlife have received scant national or international attention.

Prevention is the only solution: Power lines and transformers must be shielded or buried underground

The problem of wildlife electrocutions in Costa Rica is not too big to solve. In fact, there is already a proven solution. Animals are not harmed when power lines are shielded (insulated) and transformer leads are covered, or when electrical cables are buried underground.

By adopting shielded or buried lines as a best practice – the default practice – in all areas populated by arboreal wildlife, the power industry could end electrocutions. It is time for:

- An immediate moratorium on the installation of any new, unshielded power lines and transformers in areas populated by arboreal wildlife.
- An immediate plan to install shielded lines and transformers as soon as possible in areas where there are populations of arboreal animals, and the installation of bridges or other temporary remedial actions that will reduce the number of electrocutions until shielded equipment can be installed.

A growing threat

The electrocution of wildlife is not new in Costa Rica, but escalating commercial and residential real estate development, and the ongoing expansion of the electrical grid, has intensified the problem. In some areas of the country, wildlife rescue operations, clinics, and sanctuaries have been formed to both humanely euthanize electrocuted animals that cannot survive their injuries and to treat animals that may survive, in the hope that they might be rehabilitated and returned to the wild. The ongoing installation of new unshielded lines and transformer leads has made this work increasingly difficult and frustrating for these groups. With every new “hot” line installed, there is a corresponding increase in the number of electrocution victims.

Attempted remedies are not sufficient

Rescue centers and concerned individuals have worked collaboratively with the national power company, ICE (Instituto Costarricense Electricidad), for more than a decade to end electrocutions. As a result, some insulated power lines and shielded transformers have been installed in parts of the country. Wildlife clinics, individuals, and community organizations have also erected monkey bridges, which provide monkeys a way to cross roads without traveling on power lines.

In addition, branch- and vine-cutting operations have been undertaken in many areas to prevent animals from accessing the power lines and transformers. Some private developers have also attempted to solve the problem by spacing power lines farther apart. (This, in theory, prevents animals from touching both lines at once, which forms the deadly circuit that leads to electrocution.)



This Howler Monkey's suffered severe burns to eyes and face from contact with a live electrical line.

Why are these methods insufficient?

- Although shielded lines and transformers are fully effective in preventing electrocutions, if they are installed in a location where adjacent lines or transformers are not shielded, fast-moving animals quickly travel from safety to life-threatening danger.
- Monkey bridges may reduce, but they do not prevent electrocutions. They are not suitable for many locations and the need for continual maintenance, and the impracticality of installing bridges over the vast areas that power lines traverse, make them an inadequate, long-term solution.
- Branch-cutting can also reduce electrocutions, but it is labor intensive, and workers simply cannot keep up year-after-year with rapidly growing trees and vines that reach into the hundreds of kilometers of power lines that make up the electrical grid.
- Wide spacing of power lines is not a solution either: branches and vines grow into the lines, easily forming the circuit that leads to injury and death from electrocution.



A rescued Howler Monkey appears perplexed by his injuries.

Current power industry practices contradict Costa Rica's image as a model of environmental stewardship

National and international conservation groups and other governmental and private agencies deeply concerned about dwindling habitat and wildlife populations in Costa Rica are conducting research and working toward sustainable solutions. These are critical, laudable efforts, and they have given Costa Rica's international image a bright green shine: the country has become the world's number one destination for eco-tourism largely because of its enlightened environmental protection policies and its wildlife.

It is a tragic irony that Costa Rica's power industry repairs, upgrades, and continually expands the country's electric transmission system with equipment that results in agonizing injury and death for a significant and growing number of wild animals.

All costs must be addressed

Although the solution to the electrocution problem already exists in the form of insulated electrical cable and transformer covers, the costs to purchase and install this equipment are greater than the costs of conventional electrical hardware.

These price differences have served—and continue to serve—as the business justification for the practice of installing unshielded cable and transformers in wildlife-rich areas of the country. Individuals and businesses interested in protecting climbing animals from electrocution can choose shielded lines and transformers, but they must fully bear the additional costs and oversee their installation to assure that the protective equipment is installed as contracted.

Critical ethical and environmental factors are missing from the current business model. Facing threats from all sides, Costa Rica's irreplaceable wild animals warrant respect, protection, and humane treatment by all its institutions. It is in the country's own interest to protect and preserve its wildlife, not only inside, but outside of its national parks. Eco-tourists delight in sightings of monkeys and wild animals. Will they still come if the forests are empty?



How many more animals will be mutilated and killed before practices are changed?

It is time for the government and the broader conservation community to engage the power industry in Costa Rica and address the issue with a bold, innovative green economic strategy that will enable the industry to shift from causing grave harm to wildlife to becoming a model of ecological stewardship.

Such a strategy would demonstrate that Costa Rica's signing of the Universal Declaration of Animal Welfare in March, 2008, had an impact on its industrial policy and practice. President Oscar Arias said: "We must develop a society where... industry and commerce would not mean pollution; where human life would not lead to death of plants and animals. Because we need both development and ecological balance with respect to animals and all forms of life."

Needed now: strategic leadership and a coalition for change

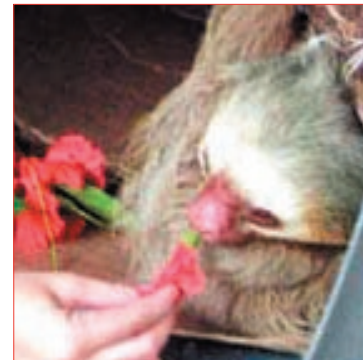
To date, challenges to the current business practices of the power industry have come from a few organizations and concerned individuals working on behalf of the animal victims of electrocutions. These efforts have produced some positive changes, but they are not adequate to address the scope or severity of the problem.

To create meaningful, comprehensive change in policy and concrete changes in actual practice in the field, government agencies, conservation organizations, and other organizations and individuals must use every available avenue to:

- Gain more information about the problem of wildlife electrocutions in all areas of the country
- Raise awareness of the problem inside Costa Rica and internationally
- Require the national government to impose an **immediate mandate on the power industry to stop any further installation of uninsulated electric line and transformers** in areas populated by arboreal wildlife and assure its enforcement
- Replace existing unshielded equipment with shielded hardware
- Find creative solutions to address the full range of cost issues, including new product sourcing and technology design

Support is needed from all of these sectors and institutions:

- The power industry
- The Inter-American Development bank and other banks that fund the development and expansion of Costa Rica's electrical grid
- Secretaria Técnica Nacional Ambiental (SETENA)
- Ministerio de Ambiente y Energía (MINAE)
- Legislators and government executives
- Costa Rican environmental and wildlife protection agencies
- Costa Rican and international conservation agencies
- Shelters and sanctuaries
- Animal welfare and protection organizations
- Wildlife biologists, zoologists, and veterinarians
- Universities
- Corporations
- Media – print/radio/television
- Tourism officials
- The legal community
- Electrical and building contractors
- Real estate developers



A sloth that burned his toes and fractured his arm after he was electrocuted on a power line.

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