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We Have To Save Ourselves From Fire

By Walt Patterson

I've just published my fourteenth book. This time, for the first time, I published it myself, online. I did so because the topic is urgent and I did not want the book to wait a year on a publisher's schedule. I also wanted set a price low enough that anyone interested could afford it. The book is called *Electricity Vs Fire: The Fight For Our Future*. It asks a simple question: can electricity save us from fire?

Why do we need to be saved from fire? Think about it. Why can't you breathe in Beijing? Why are governments wrangling over the Arctic seabed? Why have we ever more extreme weather worldwide? The answer is fire. Fire in heaters, furnaces, engines and power stations is poisoning air in cities everywhere. The craving to feed fire is why governments fret about fuel supplies. Fire produces the carbon dioxide upsetting the atmosphere and the oceans. Fire threatens our future.

We think of fire as cosy and welcoming. But fire is a violent, extreme process. It produces heat so hot it's dangerous. It rapidly turns resources into waste, toxic and pernicious both locally and globally. Fire, however, has let us control electricity. Almost everything we do with fire we can now do with electricity. Using electricity instead of fire we can adjust temperatures, make light, exert force, move things, and manage information, in ways that are more convenient and cleaner. Yet we still rely on fire, even when we don't need to, and despite the ever-intensifying problems fire creates. To address pollution, security, and climate we need to minimize human use of fire.

Electricity could save us from fire. Unfortunately, however, we still make most of our electricity using fire. We don't have to. We've known since the earliest days of electricity how to make it without using fire. We can make useful electricity, for instance, from chemical batteries and by harnessing natural forces such as wind, moving water and more recently sunlight. However, we have convinced ourselves that making electricity with fire is less costly than these other methods. Since the early Stone Age, humans have evolved with fire. We have never therefore accurately costed its pernicious consequences. We still think, for instance, that coal-fired electricity is cheap, even as coal fires suffocate our cities and exacerbate ever fiercer weather.

Because our cost comparisons are wildly inaccurate, our governments continue to allow us to resort preferentially to fire, rather than the many much less dangerous forms of electricity not based on fire. Imagine if we had electricity, and then discovered fire. Once we realized how damaging and dangerous fire was, we would almost certainly ban it. Instead, we have let fire get out of control. Worse still, we ourselves are fanning the flames.

We do, of course, now realize how much damage fire is doing. But we blame it on fossil fuels, air pollution, and carbon dioxide. Let's get the story right. Fossil fuels are not the problem. The problem is what we do with them. We burn them. We set fire to them. 'Fossil fuels' are an abstraction. Carbon dioxide is invisible. But every human you meet knows from immediate experience what fire is, and how dangerous it is. Would you be surprised to be told that using too much fire is heating up the planet?

If we want to reduce fire damage, we have to reduce our use of fire. We know how. First, we improve and upgrade the things, the physical things that actually do for us what we want to do, the lamps, motors, appliances, industrial plant, vehicles and buildings - especially the buildings. For decades we have used fire to compensate for inadequate buildings, countless millions of them worldwide. Just improving buildings could reduce dramatically our use of fire.

Then, while we are improving and upgrading the things, we accelerate the shift from fire-based to fire-free electricity. The shift is already well under way, but we need urgently to speed it up. Governments can show the way, not by legislation and regulation but by their role as major users of fire and electricity - highly desirable customers, who can define the business they want to do and the contracts they offer. Some governments, notably city governments, are already doing so. They are upgrading their own buildings; replacing public lighting with LEDs; installing local electricity generation, cogeneration and fire-free generation, heat networks, private-wire networks and microgrids; and publicizing these and similar projects as demonstrations for private industry and private citizens.

The crucial innovation we need is a new mindset, a new story, a new way to think about what we do and how we do it. That's why I wrote *Electricity Vs Fire*.

Walt Patterson is associate fellow in the Energy, Environment and Resources Programme at Chatham House in London. Walt Patterson On Energy*, <www.waltpatterson.org> , is an archive of his work since 1970.*