20/20 - Stop Fossil Fuels Get Involved stopfossilfuels.org

Maximize personal & organizational effectiveness. Join Stop Fossil Fuels in our work. Serve on the front lines. Stop fossil fuels. Build grassroots support for fossil-fuel-free energy. Climate change is warming dangerously fast, and will get much worse.

Why stop fossil fuels?

Get involved

Why must, how can we?

Resources and systems abound, but good starting points are:

- Mark Forster — http://markforster.squarespace.com
- Getting Things Done — https://gettingthingsdone.com

Consistently responsible for their tasks and obligations, and able to trust each other to do what they say they’ll do, group effectiveness increases synergistically. Consistency of work habits and dependability are impressive for individuals, and even more dramatic for a group. With members who are organized, efficient, and productive as you could be, invest the time to find and support activism against critical infrastructure. The movement isn't organized about tracking and coordinating outreach, visit our "Help Wanted" page and get in touch!

Why stop fossil fuels? 2
Climate change is wreaking devastation now, and will get much worse.

If you aren't as organized, efficient, and productive as you could be, invest the time to find and support activism against critical infrastructure. The movement isn't organized about tracking and coordinating outreach, visit our "Help Wanted" page and get in touch!

If you can help with researching or with spreading our analysis, please join Stop Fossil Fuels in our work.

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Our future: wasteland or life?

Why stop fossil fuels?

Climate change is already increasing the frequency and/or severity of fires, floods, droughts, and hurricanes. Sea levels have risen 8" with more to come. Ocean acidity has increased 30%, and coral reefs worldwide are suffering unprecedented bleaching. From 2008 to 2017, 21.3 million people each year were displaced by climate and weather-related disasters, and perhaps hundreds of millions will be climate refugees by 2050.

The devastation we’re experiencing today results from only 1°C of global warming since the 1800s. Scientists argued decades ago that limiting the increase to 1°C was the safest option, but that was considered infeasible. The Paris Agreement aims for “well below” an arbitrarily chosen 2°C, and professes it still feasible to keep warming below 1.5°C.

Pretenses of politicians aside, we’ve already locked in an increase of 1.5 to 2°C even if we stop burning all fossil fuels tomorrow:

- The earth has already warmed 1°C.
- Fossil fuel combustion produces cooling aerosols. When the combustion stops (as it must to limit damage), the earth will eventually warm an additional .5°C-1.1°C, best estimate .7°C.
- Positive feedback loops of melting permafrost, decreased ice and snow cover, phytoplankton collapse, and loss of vegetation to drought and fire will add to warming.

Conditions, already dangerous for hundreds of millions of people, will inevitably worsen. We simply can’t afford to burn any more carbon. We have a practical and moral imperative to stop fossil fuels now.

Fossil fuel pollution and climate disruption kill humans: more than 6 million annually, and climbing rapidly.

Industial pollution—air, chemical, soil, and occupational—killed 5.5 million humans in 2015, a rate increasing an average 50,000 per year since 1990. (Lancet Commission on pollution and health, figure 7)

As of 2012, climate disruption killed 400,000 humans each year. Projections are for nearly 700,000 deaths per year by 2030. (DARA Climate Vulnerability

Activists, especially those considering underground action, should use digital security tools for anonymity and encryption of communication.

Even if you don’t have a pressing need to protect your online activity, normalizing privacy assists activists who do. If only those with “something to hide” secure their data, their activity will draw suspicion. As more people use digital security tools, underground activists will better blend into the crowd.

Prism Break provides a comprehensive list of available tools, and Freedom of the Press Foundation has links to many guides. Important concepts are:

- anonymity vs pseudo anonymity vs privacy
- end to end encryption (E2EE) vs client to server encryption

Free tools with which to start:

- Tor browser: anonymous web browsing
- DuckDuckGo: The search engine that doesn’t track you
- Signal: E2EE of texts (easy drop-in replacement) and voice calls
- E2EE of instant messaging
- Wire: E2EE of instant messaging, voice calls, conference calls, and video
- Enigmail with Thunderbird or Mailvelope or GPG4USB or ProtonMail: E2EE
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Security culture is more important than any technical tools. All activists should learn these simple yet powerful guidelines.

The first line of defense is the firewall between aboveground and underground activists and groups. Law enforcement routinely investigates and surveils aboveground protesters and their associates. Underground activists must maintain distance from the aboveground to stay off law enforcement radar.

Share information on a “need to know” basis. Only those directly involved should know about illegal activities or the people committing them. Others should neither ask, talk, nor speculate about illegal activity or underground individuals and groups. Activist cultures should ingrain a code of silence.

Whether you’re aboveground, belowground, or completely uninvolved in the movement, never speak to law enforcement agents about investigations. Know your rights, politely say you don’t want to talk with them, then end the conversation.

Carelessness is dangerous to activists, but so is paranoia. Establish behavioral norms within your group, and procedures for dealing with disruptive transgressions including sexism, racism, abuse, creation of conflict and division, and violations of firewall or “need to know” boundaries. It doesn’t matter whether or not someone is an infiltrator; the group must simply address and end problematic behavior.

Those taking underground action must intensively study operational security, and carefully design and implement countermeasures to expected adversaries.

If you can serve on the front lines, the movement needs you.
Material support not only strengthens resisters' resolve by demonstrating loyalty, but directly helps their work continue. If you have the means, contribute to the legal defense funds for those caught and imprisoned by the legal system. Underground activists, you can nurture even more effective strategy and of activists and citizens must spread knowledge of effective strategy and tactics to an already impoverished 1970 baseline. To stop further loss of the wild, we must stop fossil fuels.

Our work is disproportional for our size—a stark mismatch of the scale of our task and the power we have. We face and must overcome more powerful, well-funded, and well-organized opponents and campaigns, and our actions are smaller by comparison. To be effective, we must be bigger in effort and resolve, and our actions must be more widespread and visible. To accomplish this, we must build a broad and strong movement that bridges the gap between the grassroots and the aboveground. You can join Stop Fossil Fuels or any other group working to stop fossil fuels, at the local, state, national, or global level. You can raise awareness and build support, participate directly in actions, or donate funds, goods, and services.

The strategy of stopping climate change is split into two parts: those working belowground, those who engage directly with the enemy, and those aboveground, those who work to support, organize, and raise awareness. Since those working belowground can use much more effective tactics than can those aboveground, activists should spend as much time as they need to make a careful decision, not jumping into aboveground work simply because it’s an easy option. The activist community has a long history of associated with illegal activity that can get you into trouble with the law: you can end up in jail or prison for many years, and even if you do come out, your record will haunt you. There must be a clear understanding of the roles and organizing methods.

Please help Stop Fossil Fuels get this analysis out by sharing our site with others anywhere else relevant. If you engage in or support civil disobedience, talk with others about the various options available. There are many ways to get involved, from social media, letters to the editor, blog posts, comments on websites, and even one-on-one conversations. If you can't safely participate in aboveground activism, you can still work underground, whether your passion is an ecological community, an endangered species, or future generations, we must stop fossil fuels to defend those you love.

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The environmental movement has worked for decades towards mass awakening, yet nearly everything keeps getting worse. We can't rely on hope that this pattern will suddenly change.

The movement, hoping to trigger mass adoption of a sane and sustainable way of living, has tried hard to convince individuals to change their values and lifestyles. Though some people have responded to calls for change, they remain a tiny minority. All measures of global sustainability are going in the wrong direction. Decades of environmentalism haven’t even slowed the growth of population, consumption, mining, waste, and atmospheric CO₂ concentration; all are increasing relentlessly.

Rationally, we know it’s a mistake to burn the carbon sequestered over millions of years. But it’s natural for individuals and for communities, whether human or forest or prairie, to fully utilize available energy and food. Fossil fuels are incredibly dense stores of energy, so it’s unsurprising that we’ve developed a full-on addiction. Although a few individuals may choose to forego the easy energy, the majority will happily burn as much as they can, as long as they can.

There’s no evidence of a mass shift in consciousness, and with the world at stake, we can’t afford to pretend otherwise. The only way industrial society will stop burning fossil fuels is if it can no longer get its hands on them.

Renewable energy is growing at unprecedented rates, but isn’t slowing the much faster growth of fossil fuel burn. Green tech is not a solution.

Renewables are only a solution if they actually replace fossil fuels, but as Barry Saxifrage elegantly illustrates, “the new business-as-usual is one in which we keep expanding both renewables and fossil fuels at the same time.” Industrial society is responding to ecological and climate crises not as a rational actor in control over its decisions, but instead as an energy addict using as much as it can get, whether clean or dirty.

From 2009 to 2016, total world energy consumption increased 15%. New renewables supplied less than 30% of the growth in demand, with the great majority met by fossil fuels. And if you don’t consider hydroelectric dams which kill rivers and displace humans to be “renewable,” then more than ¾ of the new demand was met by dirty energy.

We can’t wait for “enough” renewables to be in place before transitioning; we have neither the time to spare, nor assurance that more renewables will even

Get involved

We need people stopping fossil fuels. Broadly, this requires front line activists, loyalty and material support for those front liners, and dissemination of strategy and tactics.

Front line activists directly stop fossil fuels through civil disobedience, ecosabotage, or militant attacks. We need as many people doing this work as we can get.

If you’re in a position to take direct action, the planet desperately needs you. It especially needs people thinking and acting towards cascading failure—people capable of going underground to carry out ecosabotage or militant actions.

If you can’t engage in underground attacks, civil disobedience can still be valuable. Though an approach of attrition often limits aboveground campaigns, hitting strategic bottlenecks using smart tactics can win real victories. Perhaps more importantly, aboveground actions provide networking and media opportunities to share the strategy of cascading failure with fellow activists and the public.

Most of us can't be on the front lines for perfectly valid reasons. But we can all provide loyalty and material support to those doing the necessary work.

At a bare minimum, adopt a motto of “See something, say nothing,” a code of silence around ecosabotage and militancy. Encourage others to do the same.

More proactively, give front line activists, especially those working in underground seclusion, the moral courage that comes from community validation. Write and speak out in support of resisters and their actions, especially ecosabotage and militancy. Write letters in solidarity to those imprisoned for taking effective action. Expand the range of tactics considered possible and respectable.

17/20 - Stop Fossil Fuels Get Involved stopfossilfuels.org
The Shift Project Data Portal

Global energy consumption since 1900

Year

Megajoules of oil equivalent

Population grows, but their cars burn more fuel:

Motorists' increased appetite for power.

Despite years of research and development, our energy infrastructure isn't as flexible as we thought.

Why doesn't realized efficiency play a bigger role?

The problem with energy consumption is not just the systems we use, but also the behaviors that drive our use.

We need to change our thinking about how we use energy.

Some solutions are simple:

• Disperse: After an action, participants should melt back into the population at large to avoid reprisal.

• Seek quick victories: Since we lose local supportivity in minutes, we must think and act quickly.

• Simulate: The system will react to sanctions with which it can co-opt or absorb.

• Surprise: Police or private security forces show up, simple actions must evolve.

• Quick decision making: Since we lose local supportivity in minutes, we must think and act fast.

• Contingencies: Be prepared for the unexpected, but be flexible enough to include alternative responses to unexpected configurations.

• Intelligence: Gather accurate and up-to-date intelligence on the target.

• Planning: Plan each operation carefully and in detail. Keep plans and orders simple, to reduce misunderstanding and confusion. Make them accessible and comprehensive.

• Concentration of force: The system only sanctions tactics which it can co-opt or absorb.

• Command and control: Keep plans and orders simple, to reduce misunderstanding and confusion. Make them accessible and comprehensive.

• Seek quick decisions: Since we lose local supportivity in minutes, we must think and act quickly.

16/20 - Stop Fossil Fuels How We Can stopfossilfuels.org

We must use hit and run tactics:

Governments and corporations won't permit us to openly disrupt critical infrastructure.

We must target small units of tactics and operations. Those of guerrilla combat are particularly relevant to our own asymmetric struggle.

We consider not just the ease of accessing and damaging targets, but also the material impact of successful action.

Environmental activists, serious about being effective, will apply the CARVER matrix to potential targets with the goal of triggering cascading failure. They'll recognize not just the ease of accessing and damaging targets, but also the material impact of successful action.

Though underground, environmental activists to date have chosen targets which are accessible and easy to replace. The next wave of vulnerable, but neither critical nor difficult to replace. The next wave of environmental activism will target those elements which are accessible and difficult to replace.

Like the military, we must plan each operation carefully and in detail. Keep plans and orders simple, to reduce misunderstanding and confusion. Make them accessible and comprehensive.

Intelligence is gathered accurately and up-to-date intelligence on the target.

Planning is plan each operation carefully and in detail. Keep plans and orders simple, to reduce misunderstanding and confusion. Make them accessible and comprehensive.

Tactics are chosen to minimize disruption and maximize effectiveness.

The CARVER matrix guides us:

• Criticality: How important is the element to the system?

• Accessibility: How important is the element to the system?

• Recognizability: How easy is it to damage the element with available tactics and technologies?

• Vulnerability: How easy is it to damage the element with available tactics and technologies?

• Effect: What unwanted side effects may result?

• Consequences: How good is it to damage the element with available tactics and technologies?

• Efficacy: How quickly and easily can the system resume functionality after damage to the element?
Through decades of scientific warnings about the dangers of climate disruption, governments have excelled at forming bodies with official names, holding meetings, encouraging more research, and proudly announcing symbolic agreements. Yet somehow, they haven’t actually cut carbon emissions. Not only did they fail to adopt the precautionary principle as scientists debated just how big a problem global warming could be, but they didn’t take meaningful action even after scientific consensus made clear the looming catastrophe.

The most recent accomplishment, the 2015 Paris Agreement, is non-binding, with hypothetical emissions reductions far in the future. Like under the Copenhagen Accord before it, governments have no legal mandate to do anything substantive. Meanwhile, investors are pouring money into a 30% global expansion of coal power capacity; the smart money doesn’t believe governments will put a halt to burning coal anytime soon.

We all know that governments take better care of corporations than they do of people. Fossil fuels are the life blood of the industrial economy. We’d be fools to trust that politicians will suddenly decide to do the right thing after all this time. We must shut down fossil fuels ourselves.

**Fossil fuels are finite resources, so their use will inevitably decline. But peak oil won’t reduce carbon emissions fast enough.**

We can’t maintain the ever increasing extraction of oil, natural gas, and coal on which our growth economy depends. Once peak oil forces a reduction in energy use, we’ll see an escalated replay of the 2008 global financial crisis—this time permanent—and a concomitant decrease in fossil fuel combustion.

Militants frequently bomb wells and pipelines. Saboteurs (and the just plain drunk) shoot holes in pipelines with rifles. Monkeywrenchers disrupt rail traffic by damaging rails, connecting them with jumper cables, sabotaging cables, and pouring concrete or felling trees onto tracks. Underground activists cut fiber optic communication cables, topple cell and radio towers, and torch transmitters. Cyberattackers crash corporate computers and industrial equipment.

The **electric grid is uniquely vulnerable to cascading failure. It may be the most critical infrastructure on which fossil fuels depend.**

The electric grid underpins every stage of fossil fuel use, from extraction to transportation to processing to combustion. Targeted attacks on the grid could idle coal mining draglines, disable pumping and compressor stations on oil and gas pipelines, halt coal and oil trains, shutter refineries and coal preparation plants, or disrupt project administration.

Since electricity can’t easily be stored, grid operators must match supply to demand, second by second. So if, for example, damage to an electric substation were to shut down an industrial park, a power plant somewhere would have to reduce its output or shut down altogether. This would be a win-win for the planet, reducing both industrial activity and carbon emissions.

The grid is exposed. Globally, thousands of miles of high voltage transmission lines traverse remote areas, and hundreds of thousands of isolated substations dot landscapes. Saboteurs can disable lines and substations with attacks as simple as shooting with a hunting rifle, as demonstrated by experiments at Operation Circuit Breaker and by the 2013 attack on the Metcalf, California substation. Powerline towers are bombed or toppled, and substations are hit by arsons and cyberattacks.

Though the grid is designed to withstand the loss of one major node, sometimes even two, further losses overload remaining equipment. In a textbook example of cascading failure, more and more nodes shut down automatically to avoid damage.

Recovery from serious damage is difficult. Replacing high voltage transformers can take up to 18 months, as many are custom manufactured for a specific site and spares are rarely stocked. Transportation of the huge, bulky units is difficult. Replacing high voltage transformers is necessary for further disruption.

**Careful target selection of specific infrastructure is necessary for triggering cascading failures.**

A group may analyze and select targets at multiple scales before taking action. The group may decide to shut down a particular coal mining site, which might lead them to shut down the site’s electric supply. They may then identify a particular substation to take offline, and may ultimately plan their action around vulnerable transformers in the substation.

At each level of analysis, activists identify bottlenecks, elements without which the system can’t function. Obvious bottlenecks are single points of failure, such as the electric supply in this example. Where elements are networked with redundant nodes, activists look for nodes with the highest volume and most connections.
Some attacks require extensive knowledge and skills, but many are simple and accessible to anyone. Accessible attacks might not be as severe and frequent, but they are more likely to catch off guard. From a logistical perspective, we can use many diversions to mask the activities we are planning and conducting. We can also use psychological tactics to disrupt the enemy’s ability to respond. In this way, we can create confusion and uncertainty, which can help us achieve our goals. However, it is essential to keep in mind that attacks can also have the potential to cause significant damage and harm. Therefore, it is crucial to carefully plan and execute our attacks to ensure that they are effective and achieve our objectives. We can also use psychological tactics to disrupt the enemy’s ability to respond. In this way, we can create confusion and uncertainty, which can help us achieve our goals. However, it is essential to keep in mind that attacks can also have the potential to cause significant damage and harm. Therefore, it is crucial to carefully plan and execute our attacks to ensure that they are effective and achieve our objectives.
Every day, a net 220,000 new humans join the global population. At the same
time, fossil fuels undermine the planet’s ability to support even those already
here. Industrial development, manufacturing, transportation, farming, fishing,
and logging erode topsoil, destabilize the climate, toxify the environment, and
collapse populations of fish and wildlife. The sooner we stop fossil fuels, the less
we’ll overshoot, thus the less wrenching will be our adjustment.

How to stop fossil fuels

Valve Turners shutting down a pipeline

Industrial society has had decades to transition voluntarily from fossil
fuels and their known hazards, but is too addicted to give them up. It’s
time for an intervention: we must physically shut off the flows ourselves.

The consequences for humans and non humans are already dire, and getting
worse. As a society, we’ve known this for a long time, but haven’t shown an
ability to change.

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ability to change.

1. The term “nonviolent direct action,” though similar to “civil disobedience,”
also includes ecosabotage with its potential to go beyond attrition. Since
“nonviolent direct action” lumps together tactics suitable for distinct
strategies, we use “civil disobedience.”

Ecosabotage allows activists to take the offensive with a strategy of
cascading failure. It leverages limited resources against sprawling,
largely unprotected infrastructure.

Civil disobedience has a noble history in social change movements. Law breakers
proudly accept the consequences of their actions, hoping to win hearts and minds
for the cause. But we’ll never sway the general public to support the necessary
90% cut in fossil fuel use, so we shouldn’t temper effective action for their sake.

To shift to a strategy of cascading failure, ecosaboteurs might learn from militant resisters to learn how they target entire
systems of infrastructure.

In the Niger Delta, militant resistance has shuttered 10-40% of the
country’s oil extraction since 2006, an impact unmatched in the history
of the environmental movement. The militants use violence, but have
saved many more lives than they’ve taken.

Militant resistance provides, by far, the most successful examples of inducing
cascading failure and stopping fossil fuels. The best comes from the oil drenched
Niger Delta, where residents suffer the worst effects of pollution and spills:
contaminated air, soil and water make forests, fields, mangroves and rivers
unable to support human or nonhuman life. An estimated 11,000 infants die each
year due to on-shore oil spills. Despite immense riches made from oil extraction,
the general population doesn’t benefit—a large majority of Nigerians live in
Our work is the very definition of asymmetric struggle. As individuals and as a movement, we must escalate beyond perceived attrition.

Cascading Failure

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<thead>
<tr>
<th>Characteristic</th>
<th>Attrition</th>
<th>Cascading Failure</th>
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<tbody>
<tr>
<td>Knowledge of system needed</td>
<td>Limited</td>
<td>Extensive and deep</td>
</tr>
<tr>
<td>Skill, planning, &amp; resources needed</td>
<td>Limited</td>
<td>Extensive and deep</td>
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<tr>
<td>Knowledge of system</td>
<td>High</td>
<td>Low</td>
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<tr>
<td>Skill, planning, &amp; resources</td>
<td>High</td>
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<tr>
<td>System response</td>
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<td>System capacity to recover</td>
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<td>System capacity to cope</td>
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Our work is very difficult, in part because of the government's capacity to sweep them aside. Occupations of operational infrastructure can be successful in cases where the local community perceives more harm than benefit, as in Beleme, where the occupation was conducted pre-emptively. That trend is less for opposition combined with widespread grassroots support.

The Unist'ot'en Camp in British Columbia demonstrates successful civil disobedience. Their legal basis for opposition, combined with widespread grassroots support, has made it much more difficult for the government to sweep them aside. Occupations of operational infrastructure can be successful in cases where the local community perceives more harm than benefit, as in Beleme, where the occupation was conducted pre-emptively. That trend is less for opposition combined with widespread grassroots support.

To begin winning our campaign of attrition, we need not only to block all access pipelines but to escalate beyond piecemeal attrition. At a tactical level too, we rely on attrition: we don't tolerate any of the institutions' occasional victories; our actions are continuous and grinding. The Unist’ot’en Camp in British Columbia demonstrates successful civil disobedience. Their legal basis for opposition, combined with widespread grassroots support, has made it much more difficult for the government to sweep them aside.

One-off direct actions have little if any effect on fossil fuel combustion; the system has enough redundancy and backup. For civil disobedience to have material impact, not just symbolic, one must participate both on the frontlines and in support roles. Media campaigns must maintain disruptions for days, weeks, or longer. Large numbers of people are needed — one-hundred other projects are nearly unheard of. Access pipelines became well known, but one hundred other projects are nearly unheard of.

Catastrophe is imminent. By 2100, the rise of CO₂ and declining biodiversity will be catastrophic. We don’t actually weaken the forces of industrialism; at best, we’re merely slowing the rate at which they degenerate. And governments can predict our tactics. Our work becomes a relatively straightforward exploration of efficiency—frees our imagination. Our work becomes a relatively straightforward exploration of efficiency—frees our imagination. The environmental movement has been pursuing a strategy of attrition to win a kind of war of attrition.

Asymmetric forces, unsuitable for attrition

Asymmetric forces, unsuitable for attrition

Barry Saxifrage

The only year in which the world decreased fossil fuel consumption was 2009, the result of global recession. Unless forced into decline by circumstances out of our control, the economy grows more and more every year. The only likely solution is to force decreases.

Catastrophe's symbolic win some victories of attrition.

Civil disobedience has some limited applications. Though they can't achieve cascading failure, establishing blockades with enough people going abstract causal factors, it's enough for an indirect campaign against a system with far greater numbers and resources. The only way to bring the system to its knees is to force decreases.

Civil disobedience, escalating legal opposition such as petitioning, protesting, and filing lawsuits. But governments, corporations, and the general public will never allow protestors to disrupt business as usual to the point of cascading failure. At best, they'll tolerate attrition until they can disperse the blockade and governments can predict our tactics. Our work becomes a relatively straightforward exploration of efficiency—frees our imagination. Our work becomes a relatively straightforward exploration of efficiency—frees our imagination. The environmental movement has been pursuing a strategy of attrition to win a kind of war of attrition.

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Over the centuries, military analysts have derived principles of strategy and tactics. Though our goal of stopping fossil fuels is unique, we can apply what they've learned to our own work.

- Direct every operation toward a clearly defined, decisive, and attainable objective. Every campaign and action must further the ultimate goal.
- Intervene with an economy of effort. Eliminate any unnecessary secondary pursuits.
- Seize, retain, and exploit the initiative. Rather than reacting defensively on the opponent’s terms, go on the offensive.
- Use your initiative to choose fights where you can apply strength to their weakness. Concentrate your forces on their vulnerabilities.
- Surprise your opponent by striking at an unexpected time or place or in an unexpected manner. Surprise is a temporary but powerful force multiplier.
- Strike multiple targets at once for maximum impact and to keep your opponent off balance.
- Keep actions of short duration, then withdraw. Avoid prolonged engagement from fixed positions.
- Aim for unity of command to coordinate all your forces to maximum effect. If this isn’t possible, ensure unity of effort by following a shared plan.
- Maintain security, never allowing your opponent to acquire an unexpected advantage.
- Gather intelligence. Understand your opponent’s systems. Know what you’re doing and the likely effects.

To stop fossil fuels in this asymmetric struggle, we must employ a strategy of cascading failure to disrupt a fragile technological system.

Military historian and strategist Liddell Hart summarizes our work:

“It should be the aim of grand strategy to discover and pierce the Achilles’ heel of the opposing government’s power to make war.”

“A strategist should think in terms of paralyzing, not of killing.”

We needn’t dismantle every factory, destroy every bulldozer, tear up every highway. We just need to paralyze their infrastructure. The war against the planet, against the global majority of humans, and against future generations runs on fossil fuels. To move beyond a strategy of attrition, we must think in terms of systems, flows, nodes, and bottlenecks. We must understand how oil, coal, and gas are extracted, transported, processed, distributed, and burned; and where we can intervene for maximum impact.

### Attrition vs Cascading Failure

These are general trends; specific campaigns may vary.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Attrition</th>
<th>Cascading Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target type</td>
<td>New project in the works</td>
<td>Operational infrastructure</td>
</tr>
<tr>
<td>Why target chosen</td>
<td>Immediate damage caused by project</td>
<td>Criticality to the system</td>
</tr>
<tr>
<td>Campaign goal</td>
<td>Stop this project</td>
<td>Stop this piece of infrastructure, plus others dependent on it—trigger domino effect</td>
</tr>
<tr>
<td>Initiative</td>
<td>Defensive</td>
<td>Offensive</td>
</tr>
<tr>
<td>Element of surprise</td>
<td>Minimal</td>
<td>Maximal</td>
</tr>
<tr>
<td>Target’s role in system</td>
<td>Any</td>
<td>Bottleneck or interconnected node</td>
</tr>
<tr>
<td>Number of targets attacked</td>
<td>One at a time, isolated</td>
<td>Multiple, attacked simultaneously for synergistic effect</td>
</tr>
<tr>
<td>Targets available</td>
<td>Many and interchangeable</td>
<td>Few and unique</td>
</tr>
<tr>
<td>Tactics</td>
<td>Blockades &amp; occupations</td>
<td>Hit and run</td>
</tr>
<tr>
<td>Goal of actions</td>
<td>Delay project completion. Make project uneconomical.</td>
<td>Damage or destroy infrastructure, and delay or prevent repair. Make operations physically impossible.</td>
</tr>
<tr>
<td>Duration of disruption</td>
<td>Shorter</td>
<td>Longer</td>
</tr>
</tbody>
</table>