Climate Conflicts in California:

Market Mechanisms, Market Failure and the New Tyranny

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... So there was a transition from a belief in government and public interest to this powerful doctrine that the market, buying and selling, is the principle that will make everything work at the end of the day. That's the dominant ideology that we live with in America today. That's our new religion ...

Jerry Brown 2003¹

... A new tyranny is thus born, invisible and often virtual, which unilaterally and relentlessly imposes its own laws and rules... In this system, which tends to devour everything which stands in the way of increased profits, whatever is fragile, like the environment, is defenseless before the interests of a deified market, which becomes the only rule.

Pope Francis 2013²

¹ Studs Terkel, Hope Dies Last: Keeping the Faith in Difficult Times (NY: The New Press, 2003) p 222.

² Pope Francis, "Amid the Crisis of Communal Consensus," Apostolic Exhortation Evangelii Gaudium (The Vatican, Rome: November 24, 2013).

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Abstract

Fossil fuel combustion has been documented by major scientific bodies as posing an existential threat to human civilization with many scientists arguing for an immediate transition to renewable energy sources. A focal arena of conflict concerns how to make this transition. California's experience as a center for the production of environmental law is instructive, especially as regards its enactment of the Global Warming Solutions Act of 2006 (AB 32). Crafting a solution to the rapidly worsening global climate crisis confronts a conflict arising from utilizing market-based compliance mechanisms to address "the greatest market failure the world has seen."

The Climate of Conflict:

"I don't give a damn if you believe in climate change." It was vintage Arnold Swarzenegger.⁴

The message was posted on his Facebook page and many could imagine hearing the unmistakable voice of California's former governor. Even though Arnold was only an observer at the 2015 Paris meetings discussing a global climate treaty, his words captured a common political shift across the globe: something needed to be done about the worsening environment.

The actor/former governor began by arguing in simple terms of public health damage. "First – do you believe it is acceptable that 7 million people die every year from

³ Alison Benjamin "Stern: Cl

³ Alison Benjamin, "Stern: Climate Change a 'Market Failure'." The Guardian (November 29, 2007). In which Sir Nicholas Stern outlined his argument regarding market failure and the use of market mechanisms. "The problem of climate change involves a fundamental failure of markets: those who damage others by emitting greenhouse gases generally do not pay," said Sir Nicholas. "Climate change is a result of the greatest market failure the world has seen. The evidence on the seriousness of the risks from inaction or delayed action is now overwhelming. We risk damages on a scale larger than the two world wars of the last century. The problem is global and the response must be a collaboration on a global scale." He added that rich countries must lead the way in taking action....That means adopting ambitious emissions reduction targets; encouraging effective market mechanisms; supporting programmes to combat deforestation; promoting rapid technological progress to mitigate the effects of climate change; and honouring their aid commitments to the developing world."

⁴ Simon Thomsen, "'I don't give a damn if we agree': Arnold Schwarzenegger just gave a climate-change speech that will give you chills," Business Insider Australia (December 8, 2015). The related and following paragraphs are taken from the same article.

pollution?...Every day, 19,000 people die from pollution from fossil fuels. Do you accept those deaths? Do you accept that children all over the world have to grow up breathing with inhalers?" He had only begun his message.

"Now, my second question: do you believe coal and oil will be the fuels of the future?"

Unlike any number of scientists, technocrats, and policy wonks who might promptly lose the attention of their audience, Arnold displayed his finely honed skills as a political speaker. "I, personally, want a plan. I don't want to be like the last horse and buggy salesman who was holding out as cars took over the roads....That's exactly what is going to happen to fossil fuels."

If his followers were not yet convinced, Arnold pursued an argument that had served as the bedrock for achieving his stunning victory in the election to recall of a sitting governor from office: the promise of largely unrestrained markets and private sector innovations as the answer to any problem, including the threat of global warming. "A clean energy future is a wise investment, and anyone who tells you otherwise is either wrong, or lying....Renewable energy is great for the economy, and you don't have to take my word for it...Our economy has not suffered. In fact, our economy in California is growing faster than the U.S. economy. We lead the nation in manufacturing, agriculture, tourism, entertainment, high tech, biotech, and, of course, green tech."

For those who might conclude that it was simply another exercise in self congratulation, Swarzenegger acknowledged that the plan for addressing global warming belonged to a state possessing a legacy for achieving a remarkable set of laws for guiding others around the plant. "California has some of the most revolutionary environmental laws in the United States, we get 40% of our power from renewables, and we are 40% more energy efficient than the rest of the country. We were an early-adopter of a clean energy future."

His conclusion was even more concise, calling on his followers to join him with advancing "a smarter, cleaner, healthier, more profitable energy future." The simplicity of his solutions, however, masked a more divisive political story. At the heart of this

story was a question about whether one could simply rely on energy corporations and markets to deliver a clean energy future while avoiding a worsening global environment.

As Arnold Swarzenegger was calling on his followers to have faith in market solutions combined with California's environmental laws, his successor, Governor Jerry Brown was voicing a similar message at another meeting in Paris. Governor Brown's message to a multitude of cities and states gathered in Paris was equally to the point: California possessed many of the solutions to address a worsening climate crisis.

Beneath the cheerleading by its two most recent governors, California's export model for guiding others' work around the planet disguised serious fault lines. The most notable of these conflicts appeared between the golden state's public interest advocates' vision of environmental law versus that represented by the corporate lobby. A prime example had occurred only a few short months earlier when a group of global energy corporations had savaged a proposed California law (Senate Bill 350 of 2015) that many public interest groups were hoping would showcase for everyone gathered in Paris how to dismantle fossil fuel use.

It was early September, 2015 in Sacramento, California and seated across from the reporter in his expansive capitol office was one of the state's most important political figures, State Senator Kevin De Leon.⁵ As the leader for one of the state's legislative bodies, he possessed enormous political power over hundreds of legislative measures affecting everyday life for one of the world's larger economies. Amidst trappings of power, President Pro Tempore Kevin De Leon was fuming over what many regard as a rare political setback: he had been forced to dramatically alter his climate legislation by a group of global corporations.

Among the many hundreds of laws enacted each year in California, in early 2015 Senator De Leon introduced legislation having the promise of achieving global recognition, Senate Bill 350. The fact that his proposed law held the potential to

⁵ Dan Morain, "How Oil Won the Battle for SB 350," The Sacramento Bee, September 12, 2015.

dramatically change how fossil fuels are regulated in one of the world's largest economies had drawn the attention of many leading figures. De Leon recounted the supporters of his measure as including U.S. Senators Boxer and Feinstein, Representative Nancy Pelosi, Governor Jerry Brown, and President Barack Obama.

Yet, for all of this political might, Senator De Leon was forced to abandon a key provision in his legislation; a provision that would have instructed some of the world's largest oil producers to dramatically reduce their sale of petroleum over the next fifteen years. After leaving the capitol office, a veteran political reporter captured Senator De Leon's assessment of how such a grand coalition of leaders supporting his measure could be defeated -- "They didn't matter, not compared to the power of oil."

Fossil-Fueled Crises

There is a dawning recognition that the crises of our time are unlike anything in the past. A review of the unfolding climate cataclysms of the 21st century documents that with each passing year the destruction of our oceans, forests, water and food sources, species and habitats, and broad ecologies are proceeding at an astonishing rate. Distressing projections made only a few years earlier have given way to a greater certainty that humanity may well be confronting more extreme conditions threatening the very foundations of human civilization unless more dramatic and urgent actions are immediately taken to exit the era of fossil fuels.⁷

For all the dire warnings, the response thus far has been a muddled one. Calls for urgent action by governments are met with equally vigorous demands that nothing should interfere with free markets and a faith in market-based solutions. The abiding

⁶ Ibid.

⁷ In addition to various reports issued by the Intergovernmental Panel on Climate Change including its 5th Assessment, see James Hansen, et al., "Ice melt, sea level rise and superstorms: evidence from paleoclimate data, climate modeling, and modern observations that 2 ∘C global warming is highly dangerous," The Journal of Atmospheric Chemistry and Physics, Discussion Paper, 15, pp 20059 -20179.

trust in an unrestrained market is sustained by a corresponding narrative that many past crises have emerged as a kind of unforeseen accident, "how could we have known?"

The climate crisis of our day, as it turns out, has been long recognized not only by a large body of scientists, but even certain of the principal energy corporations responsible for unleashing damaging consequences on a global scale. Recently gathered evidence reveals that by the late 1970s one of America's leading petroleum corporations, Exxon, for example, was informed by its own corporate-sponsored research team that potentially catastrophic consequences would likely result from the continued use of fossil fuels.⁸ Even so, near the end of the 1980s Exxon joined with other energy corporations to block public efforts to restrict fossil fuel emissions in the face of overwhelming scientific evidence of increasingly damaging consequences.

The role of global energy corporations unleashing both a known global hazard as well as an unrelenting campaign perpetuating its uses is pivotal to understanding both the nature of the problem as well as viable solutions. The worsening climate crises of our time are neither a natural event nor a mere accident; rather, these crises are the byproduct of industrial practices and laws sustained by the fossil fuel industry. The so-called 'global warming' might be better understood by substituting a more accurate appellation: fossil-fueled crises.⁹

Among the contemporary efforts to address fossil-fueled crises, law and policy occupy a central arena. Within this arena, California's Legislature plays a pivotal role for deliberations on competing approaches. It is in this setting that a major approach for addressing the fossil-fueled crises has been framed, crafted and implemented and

⁸ Neela Banerjee, Lisa Song, David Hasemyer, "Exxon's Own Research Confirmed Fossil Fuels' Role in Global Warming Decades Ago," Inside Climate News (September 16, 2015).

⁹ Forecast the Facts appears to have been the originator of this term in twitter messages designed to emphasize that Hurricane Sandy far from being a "natural disaster" was a largely industrial event based on pumping huge amounts of carbon into the atmosphere; and most intensively during the twentieth century.

presented as an export model for adoption by others around the world. Understanding the political dynamic of California's Legislature sheds light on the comment by President Pro Tem Kevin De Leon that conflicts often have less to do with partisan divides and more to do with the power of a corporate interests in crafting market-based solutions.

California's Law Machine

In the 21st century, California is not simply a global economic powerhouse; its
Legislature has a global presence in the production of law. Each legislative session (a
period spanning two years) the Legislature typically deliberates on roughly two
thousand bills, typically sending many hundreds to the Governor each fall. Since the
1960s California has enacted tens of thousands of legislative measures. Whereas
most states and even Congress will gamely endeavor to conclude their work on a much
smaller number of bills, California is an entrepreneurial force in crafting hundreds of
laws spanning numerous topics. 11

For many interests, but especially the corporate sector, there is a vital need for an alternative to Washington D.C. On one hand, the gridlock of Congress and its glacial pace at producing law fits well with a status quo agenda. In a world of conflicts, however, the prospect legal solutions extending over multiple years is wholly inadequate, especially from the perspective of those advancing complex commercial transactions. While certain older industries may be comfortable with legal frameworks designed in the last century or before; for many in the corporate sector manufacturing everything from computers to chemicals to entertainment to finance to energy and many

¹⁰ "Jerry Brown Surpasses Reagan, Deukmejian for most bills signed," Sacramento Bee, October 1, 2012.

¹¹ The comparison between laws enacted in D.C. versus California is not readily apparent owing especially to the combining of many topics in a single Congressional measure and/or conflating budget with policy elements in Congressional bills. Another way of examining law production can be found in the situation in which many members of Congress typically have very few measures that they author or are the principal architects of, whereas in California it is more often the case that any legislator will have several measures signed into law during their first two years in office and more during subsequent years.

others confronting competitive challenges requires laws that move in tandem with innovations.

In place of being a place generating too many laws and regulations that keep the economy from advancing - the California Legislature in many instances operates according to an agenda frequently defined and mediated by corporate interests. Indeed, a number of the state's most important environmental statutes have been enacted only after agreements have been reached with significant, if not decisive, input by corporate interests and their lobbyists. In a process frequently and mistakenly cast as partisan compromises, the dynamic of such negotiations are often better understood as a conflict between public versus private interests.

If one looks for an example of this dynamic in law, one of the best examples may be found in the most popular of issues - the climate crisis. While California possesses a suite of climate related laws extending over the past several decades, the most prominent legislative measure enacted in the past decade is recognized by its humble title: the Global Warming Solutions Act. Celebrated by its advocates as a victory by the environmental community as among the most important laws enacted in the 21st century, it is prominent as one of California's most important export models, impacting law and policy in other states, federally, as well as many jurisdictions around the world.

California's Solution to Global Warming

On September 27, 2006 Governor Arnold Swarzenegger signed the California Global Warming Solutions Act, also known by its bill number AB 32, into law. 12

The bill contained three basic provisions: first, imposing a cap to limit the emissions of

¹² Assembly Bill 32, Chapter 488, Statutes of 2006. In addition to the enacted statutory language (commencing with Section 38500 of the Health and Safety Code) there are also related code sections (e.g., Section 12812.6 of the Government Code relating to the Climate Action Team Report), agency regulations, memoranda of agreements, budgetary actions, and executive orders.

specific greenhouse gases from major sources; second, utilizing existing legal mechanisms to directly and immediately reduce greenhouse gas emissions; and third - predicated upon meeting several basic conditions - to allow those facilities responsible for greenhouse gas emissions to utilize market-based compliance mechanisms to achieve the required caps on their emissions. Despite a long tradition of crafting very specific and precisely worded laws, considerable uncertainty surrounded the use of a relatively new legal concept in California statute: market-based compliance mechanisms. 14

At a time when climate scientists were increasingly insistent that everyone needed to move decisively in addressing the fossil-fueled storms of the 21st century, California was embarking on an uncertain path. Amidst celebrations by the state's actor-governor, Hollywood stars and politicians proclaiming California's new law, many public interest advocates wondered how many of the same corporations associated with the largest market failure in history were going to be a part of a market solutions to global climate change.

The essence of the bill operated according to a program that its supporters referred to as cap-and-trade, something that detractors more blunted called pollution trading. The basic architecture would require the California Air Resources Board (often referred to as 'the Air Board') to set limits on the largest emitters of greenhouse gases. This classic regulatory approach, however, would contain an essential ingredient allowing these large emitters an essential flexibility making AB 32 very different from California's classic regulatory approach: the ability to trade pollution credits. Emitters, typically owned by very large corporations, would be allowed to buy emission credits in a market

¹³ Ibid., with reference to the conditions surrounding the use of market-based compliance mechanisms, see Section 38570.

¹⁴ See Section 38505 (k)(2). Particular attention is drawn to the definition of 'market-based compliance mechanism' in reductions which establish a kind of equivalency between reductions achieved via commercial transactions (e.g., emission exchanges, banking, credits...) and those achieved via direct regulations (e.g., "direct compliance with greenhouse gas emission limit or emission reduction measure).

from other companies not utilizing all of their credits, creating an opportunity to trade credits. All large emitters would receive a decreasing number of credits for each ton of greenhouse gas pollutant based on a baseline release of these gases. The theory was that as the cap on emissions decreased over time, credits would become more expensive driving up the price on emitting harmful pollutants. Companies would have various avenues for determining how to reduce pollutant levels (e.g., installing different equipment, substituting fuels, altering chemical processes, altering supply chain inputs) coupled with incentives compelling emitters to employ less polluting alternatives.

Conflicted Framing: Trading Pollutants versus Eliminating Inherent Hazards

To properly comprehend the trading of greenhouse gases set in motion by the Global Warming Solutions Act entails some appreciation of California's other laws. It is here that the story of California's solution to the climate crisis contains a lesser known history. Among supporters, AB 32 extended contemporary pollution trading schemes existing in both the United States and internationally. The sponsors of the legislation argued that AB 32 was but a mere extension of those programs.

A fuller history would have included the fact that California's own pollution trading scheme had operated for some years in the Los Angeles air basin, a program known as Reclaim (the acronym standing for 'regional clean air incentives market'). ¹⁵ Initiated as one of the earliest programs for emissions trading, Reclaim from the start experienced a constant struggle in which companies sought political escape routes (e.g., variances granted by local air districts) from caps placed on their emissions. ¹⁶ From its inception

¹⁵ The first trading scheme initiated in 1993 by the South Coast Air Quality Management District was widely regarded as a failure due to the issuance of too many emissions credits, resulting in weak prices. See, for example, Kim Hoofs' "Property Rights in Legal History," Property Law and Economics, edited by Boudewijn Bouckaert (Chelthan, 2010). p 248.

¹⁶ See for example the Senate Floor Analysis of Senate Bill 2170 of 1996, "Now, with RECLAIM on the books and other market-based measures on the horizon, variance limitations have become crucial. RECLAIM creates an interconnected system of mass emission caps, declining balances, and tradable currency. Everybody plays by the same rules and the system as a whole reduces emissions. RECLAIM depends on each company making choices -- all the time -- between applying controls or buying credits on

Reclaim confronted intensive scrutiny from community-based organizations. Indeed, these same communities and their representatives would later challenge a basic premise of Reclaim and the Solutions Act, i.e., that pollution trading would not pose an even greater threat to the health and well-being as neighbors from oil refineries, auto traffic, and other emission sources. Reclaim's more recent history reveals a continuing struggle by community organizers to ensure the emissions trading program did not result in allowing more pollutants being dumped into the Los Angeles air basin.¹⁷

Another facet of the historic context was even more problematic for California's so-called Solution. Early trading schemes characterized 'pollutants' as a relatively small group of chemicals posing limited kinds of harm among a universe of tens of thousands of chemicals. By the 21st century scientific investigations had expanded the field of adverse effects to include a much broader array of damaging consequences with longer lasting harms. California's legislative committees actively discussed measures concerning toxic substances, air contaminants, microparticulates, endocrine disruptors, and inherently hazardous materials. The discussion among many researchers moved from how to remediate and cleanup pollution sites to a more pointed effort to dramatically reduce and eliminate such hazards from air, water and human bodies.

Many of the nation's original environmental laws remained firmly planted in an older model allowing businesses to pollute until the completion of exhaustive studies. Even with the amassing of requisite studies, decisive regulatory actions under federal statutes frequently remained stymied for decades.¹⁸ State legislatures grew increasingly impatient with inaction by federal agencies and demands for action by their citizens.

the open market. If companies can effectively 'leave the system' by getting variances instead, the market will be undermined, credit values will drop, emissions will not be fully offset and the overall program could collapse."

¹⁷ See for example the various legal actions pursued by Communities for a Better Environment and others as described in a series of accounts authored by a recognized attorney - Angela Johnson Meszaros in her blog: Clean Air Matters (e.g. "When Good Government Goes Bad," January 6, 2011).

¹⁸ See for example, Joel Tickner, editor, Precaution, Environmental Science, and Preventive Public Policy (Covelo, Island Press, 2003).

Early in the 21st century, the California Legislature deliberated on dozens of laws proposing strict and aggressive prohibitions on a range of toxic substances. ¹⁹ Precautionary laws became especially popular, calling for the rapid phase-out of numerous toxic substances (e.g., products containing lead, mercury, endocrine disrupting chemicals, bioaccumulative chemicals, chemicals present in fetal blood and other tissues, toxic air contaminants, suspected carcinogens in food and water, and other substances having records demonstrating suspected hazards). A fundamental operating premise based on new findings in science (e.g., non-threshold adverse effects) emphasized direct prohibitions in law, especially for those substances posing inherent hazards.

The framing of a California solution to the climate crisis, therefore, was instantly a contentious one. The framework for constructing a Global Warming Solutions Act in 2005 held two very distinct paths when it came to addressing the problem of global warming. Inside the Legislature, the question pivoted on whether to categorize the release of substances threatening life on this planet as a pollutant to be incrementally managed according to a calculus of what was most efficient for business to achieve versus a program premised on eliminating the release of substances posing inherent threats to human life and civilization before the end of the century and extending for centuries into the future. Instead of a large bureaucracy dedicated to monitoring facilities and their emissions, the tracking of markets and transactions, calculating adjustments for offsets and allowances, devising complex regulations, and constantly revise and update changes extending over many years - an alternative approach was to prohibit the release of inherently hazardous substances into the atmosphere accompanied by a massive program to replace fossil fuels.

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¹⁹ Mike Wilson, et al., Green Chemistry in California: A Framework for Leadership in Chemicals Policy and Innovation (California Policy Research Center, University of California, 2006).

Market-Based Compliance Mechanisms vs. Existing Laws

The conflicts surrounding the Global Warming Solutions Act were preceded by protracted struggles extending over many years. These struggles manifested a heightened conflict between the corporate lobby and public interest advocates over the unfolding crises surrounding chemicals generally and climate damaging emissions specifically.

Among public interest advocates in Los Angeles and the San Francisco Bay Area, emissions trading schemes were viewed as a disaster in which public health was sacrificed amidst supposed benefits occurring well beyond their neighborhoods. In addition to concerns about greenhouse gases, advocates were skeptical that emissions trading would curb the use of other pollutants affecting the health of nearby communities.

Many businesses were initially skeptical as well about the state's entry into the world of emissions trading. Even though traditional command-and-control regulatory laws had many critics, it was clear about who was responsible for reducing toxic emissions, in what amounts, and according to fixed schedules. While businesses often complained about regulatory paperwork, many among them noted that AB 32 now required an added element: to be savvy traders in a new commodity market.

The relationship between AB 32 and other California law was another issue of central concern. Prior to AB 32, California had enacted a multiplicity of laws and regulations severely restricting the release of toxic chemicals into the air. The early versions of AB 32 prompted a number of concerns focusing on its implementation. How would the market for emissions credits function? How were co-pollutants to be addressed? How would emissions trading be enforced? What was the jurisdiction of the state in trading schemes? Central among these questions was how California would evaluate the

advantages of using market mechanisms instead of existing regulatory programs as a device for regulating greenhouse gas emissions? While certain technical issues were addressed before the enactment of the bill, the larger issue of how pollution trading would mesh with other existing laws would remain unresolved for years to come. Over the previous two decades activists had succeeded with advancing a series of laws placing California not simply at the forefront of clean air legislation, but also with advancing laws placing increasingly significant restrictions on the use of fossil fuels in California's energy supply.²⁰

Late in the legislative session a set of amendments were forced on the authors of the Solutions Act in order to bring some clarity to an otherwise confusingly worded law proposal. There remained, nevertheless, a number of unresolved conflicts. Would California swiftly and aggressively pursue a regulatory program to move beyond fossil fuels or would it favor the trading of emission credits and other so-called market mechanisms? The final amended language of the bill while seemingly granting primacy to swift regulatory actions, also presented various opportunities for delaying what scientists had described as a situation requiring urgent and decisive actions. The most vulnerable arena for delaying the Solutions Act as well as potentially disrupting other California law resided in those provisions pertaining to emissions trading and market compliance mechanisms.

The casual observation was that Governor Arnold Swarzenegger, following a time-honored tradition in politics, decided to split the difference between these two frameworks. The Solutions Act was presented as a kind of hybrid: imposing a direct regulatory cap on emissions combined with market mechanisms including a pollution trading scheme. Seemingly the best of both worlds.

A closer review would reveal a more complex story.

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²⁰ Among the laws referred are acts relating to renewable portfolio standards, engine emission standards, energy conservation standards, air quality permits, and restrictions on toxic air contaminants.

Administrative Subversion: Inverting the Law and Delaying Actions

Even before the Governor signed AB 32 into law, California's leader of the state senate drafted a letter arguing that the newly enacted law's regulatory provisions -- in contrast to those relating to market mechanisms -- needed to be implemented immediately and aggressively. Later in another letter co-authored by the leaders of the Assembly and the Senate, the chair of the Air Resources Board, one of the lead administrators, Dr. Robert Sawyer, was asked what he needed to expedite actions on the large group of contributory pollutants.²¹ The message was clear: AB 32's earliest actions should include immediate restrictions on a broad group of pollutants threatening both the global climate as well as local neighborhoods. No less important was a crucial subtext discussed among committee and leadership staff: there was no excuse for delay, statutory authority and programs already existed to reduce the larger group of contributory pollutants.²² Whatever Dr. Robert Sawyer thought was necessary to implement AB 32, he would soon learn that moving even slowly to implement AB 32 was a risky venture.

In October Governor Swarzenegger issued one of his first executive orders for implementing AB 32; an act that even the Assembly Speaker called "totally inconsistent with the intent of the law and with the way that it is written." The essence of the executive order was to initiate market-based mechanisms concurrent with regulatory measures.

²¹ Appointed to chair the Air Resources Board on December 22, 2005, Governor Swarzenegger praised Dr. Robert Sawyer's exceptional record; "Dr. Sawyer is an exceptionally accomplished scientist, teacher and environmental policy expert who has devoted his career to using science and technology to improve air quality not only in California, but across our country and the world..."

²² President pro Tempore Don Perata and Speaker Fabian Nunez correspondence to Robert Sawyer, Chair, California Air Resources Board (The California Legislature: September 7, 2006).

²³ Executive Order S-17-06 - Implementation of Global Warming Solutions Act of 2006. As with so many other official actions by Governor Schwarzenegger, it remains unclear to what extent he was even aware of the potential controversies surrounding the soon to be rescinded executive order. Speaker Nunez's quote is contained in the President pro Tempore's letter cited below.

From the perspective of the Senate, the clear purpose of the amendments forced on the authors of AB 32 was to place primacy on regulatory reductions of emissions while allowing for market-based mechanisms only after extensive evaluation and determinations by the air board through a public process. On October 23, 2006 President pro Tempore Don Perata sent a letter to the Governor, recommending that he rescind his executive order and "implement the law that was enacted." In the absence of working together, Perata concluded the letter with a thinly veiled threat; "Please be assured that the Senate will ensure faithful adherence to the law through its actions in the policy, confirmation, and budget processes." Despite the apparent victory by the Legislature with forcing the Governor to conform to the actual language of AB 32, the issue over the direction of California's Solution would assume the character of a low intensity war.

During the next year and a half, Dr. Sawyer and many of his colleagues from across various agencies worked steadily with devising procedures and rules to implement AB 32. Numerous meetings clarified many ill-defined and potential conflicting areas that spanned the provisions of an act based on both regulations and market mechanisms. While the architecture of emissions trading was being assembled, Sawyer was at the forefront of an agency that was expected to take regulatory actions, including adopting what were termed "early action measures." These measures, as the name suggested, were intended to swiftly address some of the most easily available actions for limiting sources of damaging emissions. Taking such actions were the leading part of what climate scientists had been demanding as essential first steps in AB 32. Addressing the early action measures or "low-hanging fruit" of destructive and harmful practices included more than a hundred recommendations that California could pursue with

²⁴ President pro Tempore Don Perata Letter to Governor Arnold Schwarzenegger, October 23, 2006.

arguably limited cost and controversy.²⁵ Or at least that was the theory.

On Thursday, July 28, 2007 Dr. Sawyer was fired from his job by Governor Schwarzenegger; his removal as the chair of the Air Resources Board a direct result of having moved too swiftly to adopt additional regulatory measures to address global warming. The official story provided by Schwarzenegger's staff was sharply at odds with the account provided by Dr. Sawyer. According to the phone transcript provided by Sawyer, the Governor's office objected to the esteemed professor taking additional actions not been fully vetted. "Fully vetted," for many inside the capitol was code for Sawyer having acted against powerful, private sector interests with sway inside the Governor's office. Dr. Sawyer's firing provided a powerful signal that despite legislative leaders statements to move swiftly on regulations restricting dangerous climate emissions and practices, California's actor-governor was adopting a go slow approach, delaying any swift action on even well-recognized hazards. Instead, the Governor pushed an agenda of market mechanisms, principally built on emission trading.

California's Export Model: Pollution Trading

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²⁵ AB 32 authorized discrete early action greenhouse gas emission reduction measures to be initiated on June 30, 2007 and adopted by regulation on or before January 2010 pursuant to Section 38560.5 of the Health and Safety Code.

²⁶ The specific action by Dr. Sawyer was the result of having voted against a package of three global warming early action measures that he regarded as inadequate. Sawyer's decision, based on an understanding of the law as regarded by knowledgeable capitol staff, was simply a matter of his carrying out his duties as the Chair of Air Resources Board, i.e., "the state board shall adopt rules and regulations in an open public process."

²⁷ Paul Rosenberg, "Governor Schwarzenegger's Global Warming Act Called Hot Air," Consumer Watchdog (http://www.consumerwatchdog) July 7, 2007. "The week Sawyer's firing became public. Governor Schwarzenegger's communications director, Adam Mendelsohn, stated that Gov. Schwarzenegger wanted CARB to adopt more items -- a message consistent with the Governor's carefully-crafted image, but also another lie."

[&]quot;The next Monday, Sawyer released a transcript of a Dunmoyer voice message saying the governor's office was "very comfortable' with the three items, adding, "We really prefer you to stick to the three that we believe are vetted well, that are likely to succeed. That is the direction from the governor's office." Dunmoyer, who acted as one of the key aides in Sawyer's firing was known elsewhere in Sacramento as a former insurance industry lobbyist who authored a 2002 Karl Rove-styled memo calling for all out war on the industry's enemies."

As the Global Warming Solutions Act approaches nearly a decade following its enactment, California's "solution" occupies an increasingly precarious position. While Secretary Nichols and others now referred to AB 32 as but a part of California's suite of laws, it was often the centerpiece, the 'export model' of what was being marketed to countries around the world: an emissions trading scheme for easing corporations into the world of emission reductions.

The estimate of AB 32's accomplishment with achieving a 20% reduction in the emissions of greenhouse gases has been spoken of by the Air Board representatives, but is generally regarded with some skepticism by professional staff inside the Legislature. ²⁸ Even if accurate, there is a more general critique that such achievements have placed at risk the remaining 80% of reductions. Chief amongst these criticisms is that the state's more direct regulatory efforts to dismantle fossil fuels have been undercut by the outsized resources dedicated to its trading program while obstructing the need to implement more decisive actions, particularly with respect to investments in alternatives to fossil fuels. ²⁹

Even as California's trading scheme has been frequently presented as superior to that accomplished among forty-nine other states, many recognize that this is largely owing to the absence of any meaningful climate change law in either other states or nationally. Favorable comparisons might even be made to California and other parts of the world; except, of course, for some of its equally powerful and wealthy peers, such as Norway, Germany, Sweden and Denmark. Among this group of nations stringent regulatory programs have been combined with the financial means for dismantling fossil-fueled energy. Most notable is a side-by-side comparison of California and Germany displaying lesser achievements by California with displacing fossil fuels with renewable

²⁸ Consult, for example, testimony by Mary Nichols at the Joint Hearing of the Senate Environmental Quality Committee and the Select Committee on Climate Change, AB 32 Implementation (State Capitol, Room 4203, March 12, 2014).

²⁹ Denis Cuff, "Stricter pollution controls approved for Bay Area oil refineries," Inside Bay Area News (Bay Area News Group) Dec 17, 2015.

energy sources.30

The largest part of California's achievements with addressing global warming have been anchored in a host of laws specifically designed to restrict and lessen the role of fossil fuels. Appliance standards, renewable portfolio standards, distributed generation and community aggregation, prohibitions on the import of 'dirty' energy to the state's electrical grid, technology forcing changes in the state's Clean Air Act, restrictions on co-pollutants and toxic air contaminants from covered facilities, rail and shipping emission limits at port facilities, vehicle emission standards, conversion of truck and bus engines -- all of these and other laws have created numerous and redundant layers with a common purpose: restricting the use of fossil fuels in California.

The blend of allowances, offsets, auctions, and other market-based compliance mechanisms provide avenues to circumvent both existing laws as well as alternative regulatory approaches. In place of a regulatory certainty for such approaches as appliance standards, or auto emission standards, AB 32's cap and trade program has introduced a framework where emission standards for industry are now subjected to a range of protracted negotiations. The certainty of a "cap" for reducing emissions has been mediated by a "trade" to set prices for the emission of inherently hazardous materials. Companies continue to be allocated free pollution credits seemingly without reference to their profits or the impacts of their facilities on surrounding communities. The issue of trading has become a heightened point of conflict in a community long engaged in battles including some of California's larger petrochemical refineries.³¹

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³⁰ Germany California Learning and Collaboration Tour: Toward an Integrated Renewable Energy System (Renewable 100 Policy Institute, July 2015). See Attachment C.

³¹ Denis Cuff, Op cit. See as well the most recent conflicts occurring within the South Coast Air Quality Management District as reported by Tony Barboza, "Southern California Smog Regulator May Be Forced Out...," Los Angeles Time, March 1, 2016 "... the board voted to adopt a two-page alternative plan by the Western States Petroleum Assn. and other business interests that is expected to delay the installation of costly emissions controls at oil refineries and other major pollution sources and slow progress toward clean air."

Closely linked to the market mechanism for setting prices on greenhouse gases is the generation of revenues.³² Noting that earlier auctions in 2012 and 2013 had raised a mere \$532 million in state revenue, the fiscal analyst has anticipated that between 2015 and 2020 California's cap-and-trade revenues were expected to draw between \$12 and \$45 billion dollars. By early 2015 legislators were advancing numerous proposals for using auction revenues. The rush by legislators was a familiar scene repeated over the years when new revenue sources creating what budget staff referred to as "the feeding frenzy." Even accepting the high estimate of revenues reaching some \$9 billion a year over the five year period (an estimate that several economists cast doubt on), few legislators have explored what should be a central questions for evaluating California's Solution; whether such sums adequately reimburse the state for 1) various damages (e.g., public health, natural resource losses), 2) mitigation projects (e.g., coastal flooding, drought, transportation), and, 3) projects to replace fossil-fuel infrastructure with alternative fuels.

For an increasing number of observers, even the high estimates for auction revenues are insufficient; "there should be trillions (not merely billions) of dollars of new investment going into clean energy technologies, new energy distribution systems, retrofitting all types of structures for energy efficiency, replacing all vehicles with new, high efficiency vehicles..."³³

At the same moment as California's Governor and legislators were celebrating the new-found wealth of pollution trades, the International Monetary Fund released a study analyzing the destructive subsidies provided to fossil fuels.³⁴ Noting that global subsidies for oil, gas, and coal would reach \$5.3 trillion, the US share represented 13

³² Legislative Analyst 2014-15 Budget, op cit., "Cap-and-Trade Auction Revenue," page 3.

³³ Tony Wikrent, "Neo-liberalism, Decapitalization, and the Res Publica," as the article appeared in the blog, Naked Capitalism (June 5, 2012).

³⁴ Shawn Donnan, "Global Energy Subsidies Fuel Climate Change, says IMF Study," Financial Times, May 18, 2015.

per cent of this amount or nearly \$700 billion.³⁵ Central to the calculus of this sum were the externalities reflecting environmental and public health damages. Nicholas Stern noted that the striking report was conservative in its calculus; "A more complete estimate of the costs due to climate change would show the implicit subsidies for fossil fuels are much bigger even than this report suggests.³⁶

The combination of these features surrounding climate pollution trading obscures what should otherwise have been offered many years ago: enacting a series of laws requiring an expeditious and unequivocal exit from the fossil fuel economy. For certain observers, the early advances California achieved with dismantling fossil fuels have been increasingly undermined by pollution trading and associated market mechanisms.

For all of the weakness at the federal level, the situation is actually much worse in the context of moving ahead on a global regime for addressing the worsening climate crisis. While Governor Jerry Brown has included cap-and-trade as an approach to be adopted in various forums, including the Paris climate talks, the most important of these agreements includes signatories representing 127 jurisdictions from 27 countries agreeing to reduce their greenhouse gas emissions 80 to 95%, or limit to 2 metric tons CO2-equivalent per capita, by 2050.³⁷ While laudable, the most telling part of the agreement is the final sentence indicating that the worldwide agreements possess no legal force as either a contract or treaty.³⁸

In contrast, the United States is actively pursuing several trade treaties having both a firm legal force as well as allowing corporations to sue political entities, including the State of California, should it interfere with their business interests.³⁹ These treaties,

³⁶ Ibid.

³⁵ Ibid.

³⁷ Under2Mou.com.

³⁸ See Under2Mou.com, "Subnational Global Climate Leadership Memorandum of Understanding" wherein the full text concludes with the statement that the preceding goals are neither a contract nor a treaty.

³⁹ David R. Baker, "Mention of global warming missing from states' energy pact," February 16, 2016, San Francisco Chronicle.

both extent as well as pending, contain provisions having the legal authority to vitiate various efforts that millions of citizens around the globe might pursue in the many agreements surrounding the Paris talks and encouraging words by two of California's most recent governors. Indeed, various observers have pointed to both former and pending law suits filed by corporations under several trade regimes (e.g., NAFTA, WTO) targeting subnational laws interfering with fossil fuel markets, including efforts to advance alternative energy.⁴⁰ The ability of California to successfully defend its larger suite of climate laws is becoming increasingly precarious in the presence of so-called trade treaties and the promotion of market mechanisms over the state's rights and national sovereignty.

The most lethal threat posed by the various state, federal and international measures patterned after California's Global Warming Solution Act is contained in the use of market-based compliance mechanisms to address what many recognize as the greatest market failure of all time: a cataclysmic crisis rapidly worsening on a global scale. The particulars can be explained in a variety of ways using technical, legal and scientific terms. In a larger sense, the struggle to address what is regularly touted as the most important story in the world hinges on a conflict between private and public interests.

There is certainly a justified cynicism and suspicion regarding the path trod by those charged to represent the public interest. Yet, the record of California's broader suite of regulatory laws enacted in recent decades have been documented as providing a clear and expeditious path for dismantling fossil fueled crises. The message of these laws is a clear one: the public's right to direct and define the path of its economy. In contrast, the proponents of so-called free markets and its varied mechanisms (e.g.,cap-and-trade) have become entangled in a broader effort undermining state sovereignty over an economy largely directed by private interests. The mounting scientific evidence combined with an enlarging critique of capitalism indicates that

⁴⁰ See, for example, Ben Norton, "Profit over the planet: WTO's lawsuit ruling could be a giant blow to the renewable energy movement," Salon, February 24, 2016

crafting laws to accommodate markets only serve to propel us toward a worsening global crisis.

Conclusion: California's Solution or a New Tyranny?

The criticisms surrounding California's climate solution might remain in obscurity except for the observations by one of the world's most prominent religious leaders, Pope Francis, and his commentary on cap-and-trade. The Pope's message was wide-ranging as well as specific, identifying both negative and positive issues relating to climate change. Especially striking was the pontiff's critique of a widely offered solution: cap-and-trade. The Pope's message in this regard could not have been more explicit: cap-and-trade constituted a bad policy, a diversionary tactic benefitting the wealthy while avoiding the imperative of fundamental changes necessary to save the earth and humanity.⁴¹ "The strategy of buying and selling 'carbon credits' can lead to a new form of speculation which would not help reduce the emission of polluting gases worldwide," the Pope wrote. "This system seems to provide a quick and easy solution under the guise of a certain commitment to the environment. But in no way does it allow for the radical change which present circumstances require. Rather, it may simply become a ploy which permits maintaining the excessive consumption of some countries and sectors."

The Pope's words on a worsening global crisis have caused many, including California's current governor, to pause and reflect on the golden state's so-called climate solution. The origins and development of the state's cap-and-trade law reveals a controversial and contested terrain that has led others to question whether the approach does not contain more fundamental flaws as a solution to fossil-fueled crises. Pope Francis's critique of cap-and-trade dovetails with observations by a larger group

⁴¹ Pope Francis, Encyclical on Climate Change & Inequality: On Care for Our Common Home (Libreria Editrice Vaticana/ Melville House, 2015) p xix.

of lay observers concerned about the role of market forces compromising political processes more generally.

Lawrence Lessig, a professor at Harvard Law and until recently an independent candidate for president, cites the defeat of cap-and-trade by Congress in 2010 as an illustration of how money has money has corrupted the political process. Even though the measure represented "an extremely compromised cap-and-trade bill" and weaker than the California law, no climate law would be advanced during the next six years of President Obama's tenure.⁴²

From the perspective of leading climate scientists, resorting to market mechanisms lends itself to a process fraught with uncertainty regarding the speed with which fossil fuel energy complex is being dismantled. While supporters of cap-and-trade underscore the importance of achieving market efficiencies from the perspective of corporate balance sheets, a multitude of cascading harms accrue to the public side of the ledger. Implementing a program of market-based trading instead of swiftly imposing the suite of existing regulatory controls is a feature of market mechanisms: to maintain a business-as-usual agenda and delay the rapid dismantling of fossil fuels. Or, as climate scientist Jim Hansen has summarized the issue, "I believe the biggest obstacle to solving global warming is the role of money in politics."

From the perspective of both political economists and professionals from the world of finance comes an even more profound critique: markets, and global corporations as their principal backers, are utterly unable to deal with the kinds of problems emerging from climate change. In the political context resulting from Citizens United and associated rulings, the role of corporations has been to subordinate the rule of law to the exigencies of corporate balance sheets. It is in this context that the design of

⁴² Lawrence Lessig, Republic Lost (Hachette Book Group, 2015) p 187.

⁴³ Ibid.

market mechanisms may be fatally flawed. Observers from the world of finance argue that capitalism is ill-equipped to address the profoundly damaging consequences of fossil-fueled crises. 'Market imperfections' or 'externalities' are a passive description of what in the corridors of power is visibly recognized as an organized opposition to any decisive actions by the state to curb inherently hazardous activities threatening the survival of civilization beyond the 21st century.⁴⁴

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⁴⁴ This paper is excerpted from a larger writing project. Comments are appreciated and should be directed to Bruce Jennings at calpolitico@gmail.com.