



# Los Alamos Study Group

*Nuclear Disarmament • Environmental Protection • Social Justice • Economic Sustainability*

## **Climate Crisis: Perspectives and Opportunities for the New Mexico Environment Department**

January 21, 2009 preliminary discussion draft

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### **Executive Summary (conclusory!)**

Successful measures to prevent climate catastrophe, and to mitigate the effects of even modest climate change in the American Southwest, are inseparable from related crises in our environment, economy, polity, and society. These crises will be met together or not at all. Their severity and imminence are poorly understood, as are the opportunities they provide. Without internal government and public education, these opportunities will pass. The results of this governmental failure would be very dire in every way.

New Mexico will change radically as a result of these crises, whether we recognize them in time or not. This process is underway now and will intensify henceforth over the next few years. Some components of change will be gradual; others, sudden and unpredicted. Public policy can lag or lead events. In the former case events would be widely understood as hopeless tragedies. In the latter case they would be widely understood as hopeful challenges and opportunities.

The New Mexico Environment Department (NMED) has a dual role in addressing these crises: educative and regulatory. The former is by far the more important. NMED does not have the legal mandate or political power to significantly decrease emissions of greenhouse gases (GHGs) by regulation alone, and never will. Its primary power lies elsewhere. That power should be used. Education should be twofold: toward understanding climate science and the effects of climate change, and toward providing better public understanding of strong, effective policies.

For example, it is very important to say that we cannot afford to build new coal-fired power plants, *scientifically speaking*, and we must phase out coal use or lose our planetary home. Factually, coal is an extremely problematic “resource” and its use must be energetically and emphatically stigmatized by the state’s highest environmental authorities. We are each entitled to our own opinions, but not to our own facts, as Senator Moynihan once said.

State climate policy, if it is to be practical and realistic as regards to what we now know about climate, must be very aggressively pursued. Political “realities” are ephemeral; the basic outline of what we now know about geochemistry and climate, far less so. By definition successful policy will result in dramatic GHG reductions *over the coming decade* or so, and afterwards, as well as successfully catalyze similarly dramatic actions by other governments.

Such successful state climate policy can only be achieved by recognizing its full set of objectives, which include: aggressive, large-scale job creation; on-the-job training and educational renewal; alleviation of poverty; rural economic development; enhancement of individual economic security; improvement in public finance at the state and local levels; preservation of species and habitats; and strengthening New Mexico’s democratic institutions and enhancing political enfranchisement for its

citizens. The severe and converging crises we face not only provide precious opportunities in all these and other policy areas but, precisely due to the severity, totality, and rapid onset of these crises, the policies we choose in response to them now comprise, willy-nilly, New Mexico's primary overall development path.

It cannot be emphasized enough, for economic reasons related to the present world crisis of capitalism, that climate and energy policies, to be politically practical and economically successful, must create economic security from the bottom of society upwards and redistribute political power, ownership rights, and control from few hands, to many. This is the only way the full energies, intelligence, and creativity of society can be liberated to face the crises at hand. Energy and climate policy will increasingly define the economic and political backbone of society, with widespread ramifications in every sphere, and so policy must be considered in this comprehensive light. It will define not just what we do, and certainly not just what we do about climate, but who we are.

For example, New Mexico is virtually certain to lose many tens of thousands of net jobs in the consumer and tourist sectors in the coming decade, on top of an existing situation in which at least 350,000 persons live in poverty (a 2006-2007 figure; we might estimate about 400,000 persons today, if undocumented residents are included). Many of these live in extreme poverty – at half or less of the (outmoded) poverty-income level. Approximately 50,000 persons are officially unemployed. To this we must add a reasonable estimate for “discouraged workers” and the grossly underemployed, which would probably triple this. Thus New Mexico needs 100,000 to 200,000 or even more, good, stable, rewarding jobs *right now*. We will not be able to provide these jobs, let alone the comparable additional and compounding number of jobs we will soon lose, unless we address our imminent energy and climate crises. Indeed the policies we enact to deal with these and related crises are the primary means we have to create jobs. We have to “make the trend our (very good) friend,” quickly.

Cap-and-trade (C&T) policies will not successfully reduce GHGs – or meet these other key objectives. They would principally benefit portions of the financial sector and a few polluting monopolies at the expense of the rest of society. Such policies will be worse than ineffective, exacerbating a variety of existing problems while also failing environmentally. Caps on GHGs enforced by other means such as environmental permitting will likewise fail politically, administratively, and environmentally. Both these types of policies are just “business as usual,” or possibly worse. They are not steps toward anything but failure – environmental, economic, and societal.

Many of us are fascinated by technology, but we should leave Faust's career behind. We should of course embrace the best technologies for solving our problems, assuming those problems are properly posed (not always the case), whenever we can do so without creating even bigger problems. There are not now, nor will there be any, technological “fixes” that can solve the climate problem without also restructuring our economy, evoking our common conscience, and reforming our politics. The technology we need largely already exists, and we must implement what we have quickly while improving it as we go. Successful solutions will be mostly characterized by common, known principles and techniques, incrementally improved and applied uniquely to particular situations. The scientist, engineer, mechanic, farmer, and artist will need to get acquainted again, and *techne* assume some of its original Greek range of meaning. Preventing climate change is not primarily an R&D problem. The innovation we need lies mostly in politics, law, engineering, agriculture, planning, administration, community organization, and in the crafts and trades.

New nuclear power installations and technologies have no useful role to play, for a variety of compelling reasons, not least of which are overwhelming diseconomies, political and social externalities, and poor job creation potential. Wall Street still has not embraced them, and without

massive government subsidy they appear to have little future. Grain ethanol is likewise no help – little or no net energy and infeasible without subsidy – and cellulosic ethanol is not promising either, for a variety of reasons. Technological assessment is not however the purpose of the present discussion.

Successful climate policies will address the “low-hanging fruit,” the full panoply of policy objectives, and devote less attention to relatively intractable, smaller parts of the problem. They will communicate clearly, be easy to administer, use existing procedures and institutions, and provide immediate rewards for powerful constituencies. The political solution to effective climate policy largely involves educating and mobilizing the constituencies which will benefit most directly and quickly from these policies – and expanding this set of constituencies.

Energy and climate policies in New Mexico should aim for job creation on the general order of 25,000 total jobs per year, including secondary job creation. Climate policies must be phased to accommodate workforce training. Right now, most New Mexicans don’t need to sing, “If I had a hammer...” because they *have* one. Many of the most important energy infrastructure changes we need can be addressed by today’s workforce right now, especially if incentives and programs for on-the-job and other vocational training are provided. Good climate policies will create new state income streams to pay for this and other programs. Everybody needs to pitch in one way or another, and vocational experience and training in climate, energy, and mitigation should be a feature of professional curricula as well. “Everybody joins in.” Adding roughly 1 full-time new job each year to directly address climate change or mitigate to its effects for every 100 existing New Mexico jobs, plus approximately one other job created indirectly, are not too many to add each year, by any stretch of the imagination.

In New Mexico, climate policy must focus very strongly on coal mining and use, not only because coal is the source of 40% of our GHGs (not counting any net coal exports), far more than another source, or because coal must be the primary climate policy focus in the U.S. as a whole and worldwide, but also because practical renewable alternatives to most coal use, alternatives with far greater economic and social potential, exist right now. *New Mexico climate plans and policies must centrally direct themselves to weaning New Mexico from coal.* A 75% reduction in coal use by 2020 is feasible and desirable, to be followed by near-total phase-out in something like the following 5 years. These aggressive schedules are illustrative only, but they follow generally not just from climate needs, but also from job creation needs.

Transport fuel carbon emissions will decline significantly between now and 2020 for exogenous reasons: declining production worldwide (at least -2%/yr), increasing fractions of production used within exporting countries, an expected long-term decline in average disposable incomes (relative to the cost of both driving and airline travel), and gradual fleet improvements, including some electric and methane substitution. These factors are likely to decrease transport fuel use by at least 40% by 2020, quite apart from directed climate . Improved public and semi-public transit options together with a variety of other possible policies can improve this prospect further, but as transportation fuels contribute only 17% of New Mexico GHGs today, in themselves these improvements will have only a relatively small effect on New Mexico’s GHG emissions. Significant transportation and land-use improvements are necessary however to avoid severe economic impacts from declining fuel availability, quite apart from climate and job creation goals. These would in themselves be a potent source of good new jobs.

Successful climate policy will be at least partially centered in tax and fiscal policy, with new taxes, new incentives, and new rebates. For example, existing severance tax mechanisms provide much of a possible framework for carbon taxes, which should be applied at the mine and wellhead. These need not be the same for coal, oil, and natural gas. (Carbon taxes for coal could be higher than those for

ordinary petroleum and natural gas if desired; carbon as methane is ephemeral and does not acidify the oceans and scalable substitutes for transport fuels are costly.) Income and corporate tax systems are ready-made for many rebates and incentives.

Some outright prohibitions may be legally possible. Case-by-case analyses and permitting should be avoided where at all possible.

Climate change is causing vegetation losses in many parts of New Mexico; insects and fires are likely to increase wildland carbon emissions. Offsets from vegetation growth, as we sometimes see, may be fanciful.

Considerable efforts should be expended to preserve habitats, threatened species, and the full range of wildland types and uses. These efforts should be designed to preserve human communities as well as natural ones, provide unique educational opportunities, and create long- as well as short-term stewardship and educational jobs. Our scientific education would benefit greatly from a renewed emphasis on organism- and ecosystem-level pure and applied biological sciences, taught in part in the field in the stewardship context and building on existing traditions, values, settlement patterns, and skills.

With these and other overall principles in mind it is possible to evaluate possible climate policies against a series of objectives. Bold, confident progress in agency, legislative, and public education, independent of specific current legal and regulatory proposals, will allow New Mexico to adopt successful climate policies that also serve a necessarily balanced set of interrelated public purposes.

Either tragic change will come to us dramatically – virtually overnight it will seem, in sorrowful hindsight – or else we will take ourselves in hand and change dramatically and positively – again, seemingly overnight – in our aspirations, plans, policies, and identity. Science – that is: fact, reality – dictates the need for this rapid change. Not only does science tell us we are past the era of successful slow, incremental change, but dramatic change is often politically easier.

New Mexico can and should aspire to be known by its citizens, on the job every day as well as in the inevitable political sloganeering, as a true leader in addressing climate and energy. This is our best, and quite possibly in the coming years our only, ticket up from the bottom of the nation's social and economic rankings. Given our fortunate solar, wind, and geothermal endowment we *can* be the very best, and in many ways we *must* be if we are to transcend our current and foreseen problems.

Such a rapid and decisive transition, in which we gratefully play our roles without reservation and with contagious enthusiasm, is our simple responsibility to the poor, to our ancestors, and to our children and grandchildren. We are their only voice. As stewards of the living earth we can and must protect the animals who have walked this long way with us, whose purposes transcend ours, and who still, as Blake said, “keep the human soul from care.” We can and hopefully will gradually establish, though it may take a generation, the awareness that such responsibility is the path of fulfillment and maturity, not just for each of us but also for our society.