There is a myth in America that markets, not plans, are the key to success. Markets will supposedly decide our climate future on their own once we institute cap-and-trade legislation to put a market price on carbon emissions. But this is silly: both markets and planning are essential in any successful large-scale undertaking, whether public or private. We need a detailed yet adaptable road map for action that goes far beyond cap and trade.

The Obama administration has declared that U.S. greenhouse gas emissions should be around 15 percent lower by 2020 than they are today and around 80 percent lower by 2050 than they were in 1990. Other regions, notably Europe, are demanding that those U.S. cuts be larger. Such debates are taking place in a near void, however. Because there is no clear plan yet for achieving any particular objective, there are no reliable estimates of the costs, policy instruments and choices that society will have to face. All is, instead, being left to the market.

The administration’s climate negotiator has called cap and trade “the centerpiece” of the domestic climate program. A moment’s reflection shows why that cannot be right. Cap and trade will have little effect, for example, on whether the U.S. revives its nuclear power industry, as it should to meet climate objectives. A renaissance for nuclear will depend on regulations, public attitudes, liability laws, and both administration leadership and public education much more than on cap and trade, which would play at most a supporting role.

The potentially pivotal carbon capture and sequestration technology for use at coal-fired power plants will depend on proving its safety, soundness and cost-effectiveness. Proof will require several expensive demonstration projects, all of which will need political leadership, clear regulatory standards, public financing and the active engagement of geophysicists to monitor the projects. Cap and trade will be irrelevant until the new technology is tested in a variety of settings. The national emissions-reduction targets may prove to be easy or exceedingly tough, depending on the outcome of these crucial demonstration efforts.

The future of the automobile is similar. Cap and trade or higher gasoline taxes might help nudge consumers toward more fuel-efficient cars, but the advent of a national fleet of plug-in hybrid, fuel-cell-powered or all-electric vehicles will depend much more on a large-scale public-private development effort that links research with investments in a new power grid and in other critical infrastructure.

The administration has started in a “listen and learn” mode in international climate negotiations, which is certainly fair enough after the antiscience bullying and international neglect that characterized the Bush years. It has also left legislative drafting to the Congress, which has so far resulted in an ungainly and nonstrategic 648-page draft bill that has everything possible loaded into it yet little strategic direction other than cap and trade. Global negotiations and legislative horse trading may come to be seen as a real climate policy, but they can never substitute for rational planning and policy making.

A crucial question is whether the U.S. government can produce a detailed and coherent plan. For decades the federal government has distinguished itself with a lack of coordination among competing departments, an allergy to detailed plans and a capacity for narrow interests in Congress to frustrate the most basic logic of thinking ahead. One major plus, though, is that several Obama appointees on the climate change issue are world-class leaders in the field. That expertise will be needed. Climate change is the most complex of all the challenges facing the world: it reaches into the core of the economic system, raises fundamental questions about technology, poses tremendous natural and social uncertainties, requires an outlook of decades, and engages every interest group. These are reasons why we need an adaptable plan and rational framework more than ever, but there are also reasons that help to explain why—nearly 20 years after the 1992 Rio Earth Summit and the agreement on the United Nations Framework Convention on Climate Change—we still lack one.

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