What will it take to get more electric cars on American roads? Lots of federal cash and maybe the auto-industry version of a "buy one, get one free" deal.

The Obama administration is proposing to spur production of electric cars with a "build one, get one free" offer: Build one "zero emission" battery-powered vehicle, and get to count it as up to two vehicles when figuring the average fuel efficiency of a new-vehicle fleet.

The details of federal fuel economy rules are what those of us who refused to take math and science classes in college will be forced to read in purgatory. But government and industry officials familiar with the proposal say it works something like this:

Say Green Motors Co. builds 200 cars that emit 300 grams of carbon dioxide a mile, and 50 all-electric cars that don’t burn any petroleum to operate. Those electric cars would get a rating of 0 grams of carbon per mile, and the car maker could use a multiplier of 1.2 to 2 when counting them toward a fleet-wide average calculation. So, in the best case for the car maker, 50 electric vehicles becomes 100. And instead of averaging 300 grams per mile per vehicle, Green Motors’ fleet averages 200 grams per mile per vehicle—even though the company did nothing to the bulk of its vehicles.

That’s a crude illustration, but it represents a scenario that has provoked concern from environmental groups in recent hearings conducted by Environmental Protection Agency officials in several cities, including Detroit.

“We believe the credit for a vehicle should be commensurate with its environmental
"benefit," says Dan Becker, director of the Safe Climate Campaign in Washington, D.C. Electric vehicles are cleaner than most cars, Mr. Becker says, but they aren’t strictly zero-emission cars. The electricity comes from somewhere, and in much of the U.S., that means a power plant burning coal.

Boosting Fuel Efficiency

The Alliance of Automobile Manufacturers, which represents 11 of the biggest auto makers in the U.S. market, has testified for the credits as proposed. “The ability to earn, trade and bank credits” by producing electric and hybrid vehicles “is essential to meeting the goals of the national program,” which calls for auto makers to boost the average fuel efficiency of their fleets to 35.5 miles per gallon by 2016, says Charles Territo, an Alliance spokesman.

The next two to three years could see the arrival in force of a new generation of electrified vehicles. More than a dozen car makers have announced plans to offer battery-powered vehicles in the U.S. by 2013, among them Ford Motor Co.’s Focus BEV (“battery electric vehicle”) and Nissan Motor Co.’s LEAF. Chrysler LLC and Volkswagen AG also plan electric models, according to the Electric Drive Transportation Association, an electric-vehicle trade group in Washington, D.C.

Some upstarts are already out with electric vehicles, including Tesla Motors Inc., or plan to bring vehicles to market in the next year or two, among them a California company called Coda Automotive, which counts among its backers former U.S. Treasury Secretary Henry Paulson.

Throw in partially electric vehicles—plug-in hybrids such as General Motors Co.’s Chevy Volt and similar models promised by Toyota Motor Corp. (which makes the Prius, the bestselling hybrid on the market), Chinese auto maker BYD Co. and U.S.-based Fisker Automotive Inc.—and people who want to drive a car that can go a long distance without burning petroleum will have the widest array of choices since the early 1920s.

Betting on Buyers

This outpouring of new electrified cars is a testimonial to the new mantra in Washington—policy creates markets. The U.S. government has committed billions in taxpayers’ money to the proposition that American consumers will embrace electric...
vehicles in substantial numbers if car makers can just overcome the high start-up costs to build them.

The long-term question is whether a market dependent on government subsidies—financial and regulatory—can sustain itself without them.

The proposed extra fuel-economy credit for electric vehicles is supposed to end in 2016—by which time, presumably, mass-market demand will be self-sustaining. But the economic and performance advantages of gasoline-fueled internal-combustion engines could take longer to overcome than that.

One reason car makers are racing to get electric vehicles into the market is that "advanced technology" vehicles produced ahead of 2012 can generate credits auto makers can bank and use to reduce their overall fleet average—and cover temporarily a failure to achieve the mileage targets in the real world. Manufacturers that accumulate more credits than they need can sell them to a rival, offering another potential way to cover the costs for developing new green technology.

Make no mistake. Green is what this is all about—greenbacks, that is. Auto makers, particularly Detroit’s battered giants, have no choice but to meet the government’s demands for high mileage, high-tech cars. But they are still worried these cars will cost too much to sell profitably, especially if gas remains comparatively cheap.

"The business equation ... to make electric vehicles work doesn’t exist without something like this," says Nancy Gioia, director of Ford’s effort to offer electric vehicles world-wide, referring to the credit program. Customers want to see the extra money they pay for advanced technology recouped in fuel-cost savings in "at most three years," Ms. Gioia says, or even less.

That can’t happen unless car makers can offset the costs of advanced batteries, exotic materials and extra engineering that goes into an electric car, enabling them to sell it for less.

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