



Let's send the renewable ones to Los Angeles.

Federal Energy Regulatory Commission (FERC) Chairman Jon Wellinghoff [recently voiced concern](#) that California's cap-and-trade program could lead to unforeseen consequences that would upset energy markets. He was speaking about resource shuffling, and echoing a [letter](#) his fellow Commissioner sent to the California Air Resources Board (CARB) in August.

What is resource shuffling? According to CARB, they will know it when they see it:

"Resource Shuffling" means any plan, scheme, or artifice to receive credit based on emissions reductions that have not occurred, involving the delivery of electricity to the California grid. 17 Cal. Code Regs. § 95802(a)(251).

Resource shuffling is prohibited, and importers regulated under California's program must attest that they or their suppliers have not engaged in the practice. § 95852(b)(2)

You would be forgiven for thinking that definition is a bit vague. [FERC](#), [investor-owned utilities](#) and the [Emissions Market Assessment Committee](#) all find the definition imprecise and unclear. So let's try again. What is resource shuffling and why do we care?

To answer that, you must first understand that the electrical grid is basically a bunch of electrons that move from power plants to electricity consumers. Electrons are, well, indistinguishable. All look equally innocuous. But some may represent tons of carbon emissions from a coal-fired power plant while others represent zero emissions (and a few aggrieved tortoises) from solar plants in the Mojave. And electrons flow towards the path of

least resistance. Thus it is rather difficult to convince any particular electron to go to California instead of Nevada or Utah, and even more difficult to identify the “renewable” electrons once they arrive in your home to power your iGadget.

Now imagine that a municipal utility (we will call them LADWP) contracts with a power importer. That power importer can get power from a coal-fired power plant and a wind farm, both in Utah. If both plant and wind farm supply power to LADWP in equal amounts, then we can say the power supplied is 50% clean energy. But clean power commands a premium in California’s market, because LADWP (and/or the power importer) have to purchase allowances to cover the emissions associated with the coal-fired power.

So the power importer has a brilliant scheme to increase profits: Divert all the wind power to LADWP, because it is in high demand there, and divert all the coal to power Salt Lake City. An electron is an electron, so no one can really tell whether the power originated at a coal plant anyway. And on paper, California is 100% renewable. But wait, you say, wasn’t the point of cap-and-trade to decrease *overall greenhouse gas emissions*, not just give California bragging rights about its renewable energy supply? And indeed, the total greenhouse gas emissions remain exactly the same: 1 coal plant + 1 wind farm. If California wants to reduce its share of emissions, then the coal plant should be retired, not just reallocated to Utah’s emissions account. At the very least, a new wind or solar plant should be constructed to fulfill some of California’s energy demand.

And therein lies the problem. California wants to encourage retirement of dirty power plants and the construction of cleaner, renewable plants. But it is hard to determine if any particular scheme is doing that, or just simply an exercise in paper shuffling of electrons. Thus CARB has an incentive to define resource shuffling broadly and vaguely.

In their August letter, FERC complains that “by failing to clearly define ‘resource shuffling’ but nevertheless prohibiting it,” CARB is discouraging participation in the California imported-power market. Because approximately 25% of California’s electricity comes from imports, reliability and affordability of the electrical system is at risk if companies choose to stop importing electricity into California. While I think the tone of the FERC letter is a bit hyperbolic—are power producers really going to abandon the rather lucrative and extensive California market?—there is little doubt that uncertainty about resource shuffling is bad for the market.

CARB responded with [their own letter](#), and then [Resolution 12-33](#), in which they suspended enforcement of the resource shuffling prohibition for 18 months. [Edit: Technically, they suspended only the attestation requirement, not the underlying prohibition. Whether CARB

could enforce the prohibition without the attestation is unclear, particularly given the vagueness of the current definition.] In other words, CARB is taking a wait-and-see approach and will probably develop a more comprehensive definition in the future. (CARB did have a more thorough definition of resource shuffling in earlier drafts of the regulations. [Our report from last summer](#) on the cap-and-trade program objected that the more thorough definition was incomprehensible and likely over-inclusive. But we did not expect CARB to obliterate the definition altogether.) [Edit: CARB apparently passed a board resolution last week that identified certain safe harbors to the resource shuffling definition, but that resolution is not yet available online.]

This leaves me a bit confused about why Chairman Wellinghoff raised the resource shuffling question now. (Admittedly, I have not found a transcript of his remarks, so I don't have the full context.) He said that he agrees with the concerns expressed in FERC's August letter. If FERC's concern is that uncertain liability over resource shuffling will lead to higher prices and less liquidity in the California power market, then the 18-month suspension of the rule should appease that concern for now. Chairman Wellinghoff also mentioned "the lengths that people can go to to find loopholes in markets." Perhaps he should be more concerned that lack of enforcement over resource shuffling is an open invitation to try to game the import power market in California?