



Comments of USS-POSCO Industries
Cap-and-Trade Regulation Amendments Workshop
November 4, 2016

USS-POSCO Industries (UPI) appreciates that ARB staff is attempting to foster objective, data-based mechanisms to address “leakage” concerns related to California’s Cap-and-Trade program. Although the domestic and international leakage studies referenced by ARB produce numerical results that staff used to revise Industry Assistance Factors (AF) post-2020, UPI believes that the studies do not provide adequate justification for significantly reducing AF levels, and that such reductions could instead cause increases in worldwide GHG emissions as production from California operations moves to locations that have higher carbon-intensive resources.

ARB’s updated Informal Staff Proposal¹ references two leakage studies² as the basis for its proposed changes to AF. While the studies attempt to provide some analytical rigor to the development of AF levels, they also acknowledge their own limitations. The international leakage study states:³

The natural next step, from the perspective of a policy maker looking to assess leakage risk and target leakage mitigation measures, is to translate these responsiveness measures to corresponding measures of market transfer and associated emissions leakage. However, pushing on to this next step amounts to pushing up against the limits of available data. One complication is that calibrating the measures of leakage risk implied by the theory requires dividing one noisy estimate by another. Other caveats include the fact that we cannot directly observe foreign production and instead employ an imperfect proxy. In what follows, we describe a conceptually consistent, albeit noisy and caveated, derivation of leakage risk measures.

The domestic leakage study states:⁴

First, the lack of statistical significance for many of the long-run estimates suggests that there may not be sufficient historical energy price variation to estimate the effects. Second, the long-run responses are inherently more complicated to model than the short-run responses, because the long run includes dynamic decisions about investment and plant closure. While a benefit of our approach is its relative simplicity and transparency in modeling the

¹ <https://www.arb.ca.gov/cc/capandtrade/meetings/20161021/ct-af-proposal-102116.pdf>, October 21, 2016

² Measuring Leakage Risk, Fowle, et al, May 2016.

<https://www.arb.ca.gov/cc/capandtrade/meetings/20160518/ucb-intl-leakage.pdf> and Employment and Output Leakage under California’s Cap-and-Trade Program, Gray et al, May 2016. <https://www.arb.ca.gov/cc/capandtrade/meetings/20160518/rff-domestic-leakage.pdf>

³ Fowle et al, Page 38

⁴ Gray et al, Page 21

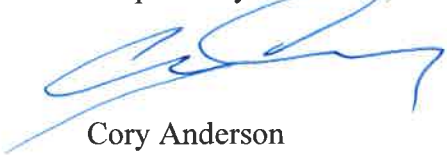
of our approach is its relative simplicity and transparency in modeling the effects of energy prices on economic activity, we may not suitably capture some of the nuances for certain industries, particularly in the long run.

Neither of these apparent caveats appears to encourage strict adherence to the numerical results of the studies in determining future AF levels. Further, reliance on such results could undermine California's industrial competitiveness. The solution is clearly a national or international carbon pricing or related GHG reduction strategy that would render the entire leakage issue moot. Unfortunately, and despite its best intentions, California cannot unilaterally implement such a solution. It is important, however, that California not turn its Cap-and-Trade program into a cautionary tale.

UPI recommends that long-term reduction in the AF values be implemented on a more gradual basis than proposed. In addition to a lack of confidence in the predictive value of the numerical results of the studies, UPI is concerned about the overall negative implications of under-estimating potential leakage. First, the studies base leakage on energy prices in California versus elsewhere. They do not appear to account for the difference in current carbon intensity in California versus elsewhere. In other words, thanks to an existing fairly low carbon-intensity energy supply, and anticipated ongoing reduction in carbon-intensity, California industries are likely to be responsible for less GHG emissions for a given level of production. Thus, leakage not only impacts employment and economic activity within California, it results in greater overall GHG emissions than if the production remained here. Second, carbon allowance prices are expected to increase as the cap level drops. Combining this with a dramatic reduction in assistance factors would have an even more dramatic impact on the competitiveness of California manufacturing, expanding the amount of leakage.

As a result, rather than instantaneously dropping assistance factors from 75% to 15% (in the case of UPI's sectors), a more gradual reduction would be better for industry in California, result in overall lower levels of GHG emissions (versus shifting production elsewhere), and protect against overconfidence in analytical results that, while well intended, may not accurately reflect reality. If ARB determines that the potential for reducing AF values to encourage California industry to reduce carbon emissions is significantly greater than the impacts of the expected increase on allowance costs over time, it should implement the reduction more slowly, perhaps ramping down over a ten-year period (from 2020 to 2030) rather than immediately.

Respectfully submitted,



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