

CO2 Allowances: Efficiency and Equity

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WHO GETS THE CO2 ALLOWANCES: TWO PRINCIPLES and a LITTLE HISTORY

- Public Asset: Public Owns Right to Pollute its “Commons”
- Prices Should Internalize All Costs (“Polluter Paying” is one way to do so)
- Historical: Gave Allowances Away—thinking we would “get the value back” in the ratemaking process.

Allocation in Competitive Wholesale Markets

- “Rights to Pollute” are just another cost of production;
- Generator-emitters charge for allowances in their bid offers—whether they get the allowances for free or pay for them;
- The price-setting bid (usually a gas unit) has the allowance value included in the market clearing price.

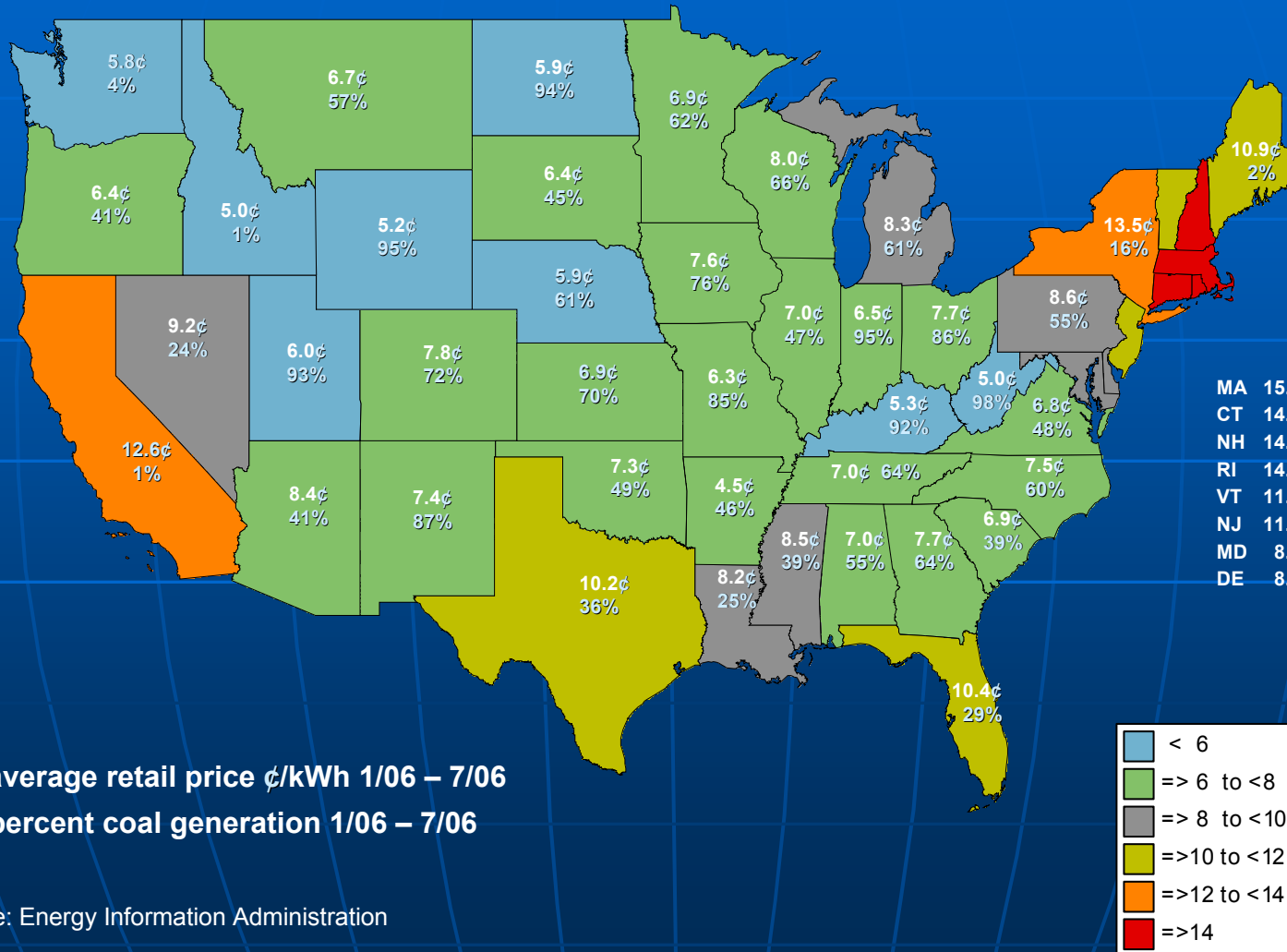
Allocation in Regulated Wholesale Markets

- Could give allowances to emitters for free, and not let them charge customers for them, but...
- Prices should reflect all true costs—should offer full, economically efficient incentives for no- and low-carbon technology adoption and development.

Interaction of Competitive and Regulated Markets

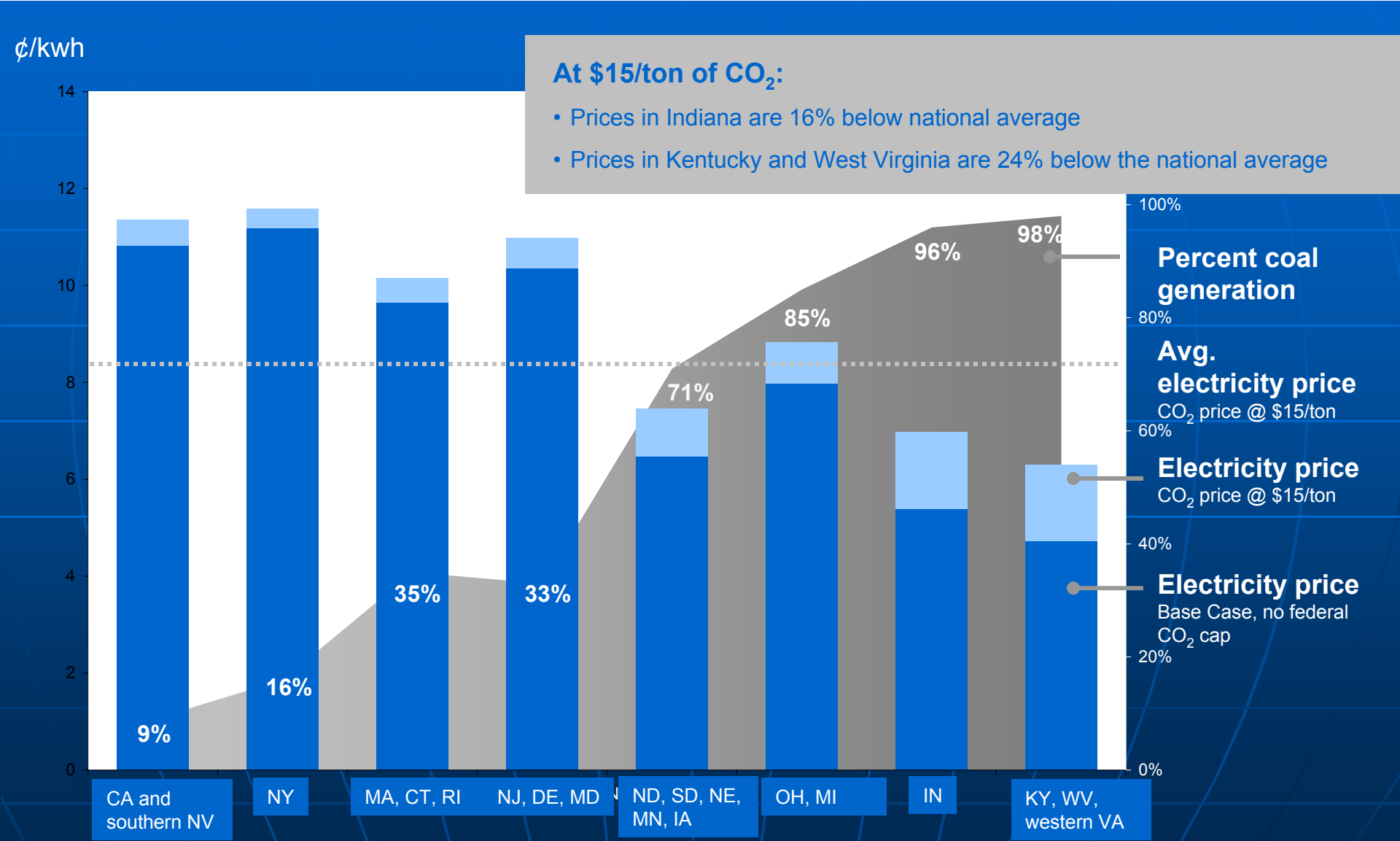
- Unless there is unusual treatment of costs by RTO/ISOs, the **competitive markets** will include cost of allowances in the market clearing price set by marginal (fossil) unit;
- If **regulated markets** do not include the cost, their prices will be “even more lower” than competitive regions’ prices;
- To seek efficient allocation of resources, to encourage development of all cost-effective CO₂ reduction technologies, all regions should include allowance costs in prices.
- CO₂ price increase will become significant.

Retail ¢/kWh and Percent Coal Generation



Source: Energy Information Administration

RFF-Burtraw Slide: CO₂ compliance costs are projected to increase electricity prices the most in coal-intensive parts of the U.S. However, prices in higher CO₂-emitting states remain well below the national average.



Cap and Trade Assigned to Buyers (LSEs) rather than Generators

- LSEs (rather than generators) 'capped'--need an allowance for every ton of CO₂ emitted by electricity they buy for retail sales;
- Should be an Auction: LSEs buy them--prices right;
- California Imports: Needs load-based or first-seller approach, not generator based--leakage;
- California LSEs: Central role in Portfolio Mgt.--other states maybe not (NYSERDA and VEIC);
- Complications on auction, dispatch and CO₂ attribution?
- Need to experiment....