

REGI CO2 Allocation

Recommended Approach

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Process

- KeySpan endorses the RGGI MOU
 - Recommend no greater than 25% public benefit and strategic energy set aside
 - Auction increases compliance risk and marginal energy prices because “risk premium” must be built into the dispatch price
 - Risk premium ultimately paid for by consumers in higher energy prices
- Allocation process should incorporate regular updating and should reward, not penalize carbon efficient units

Allocation Formula

- **Objectives**

- Gradually improve NY power plant fleet wide carbon efficiency to meet RGGI goals
- Minimize cost increases and cost risk for carbon efficient units that often operate on the margin
- Encourage underutilized carbon efficient units to run more

RGGI CO2 allocation proposal - carbon efficiency based allocation formula

Hypothetical case:

CO2 tons to be allocated to sources for free = State budget minus 25% consumer benefit and strategic energy set aside

Source Units (>25MWs)	Highest single year gross generation 2001- 2005 (MWHrs)	Corresponding year CO2 emissions (tons)	Simple Allocation (Highest single year source emission x budget allocation factor)	Source's CO2 Emission rate (lbs/MWHR)	Source's Carbon Efficiency Factor (State avg. CO2 emission rate/source CO2 emission rate)	Carbon Efficiency based allocation (Simple allocation * source's carbon efficiency factor)
250MW gas CC	1,971,000	808,110	519,336	820	1.876	974,026
400 MW oil/gas	1,854,930	1,298,451	834,457	1,400	1.099	916,667
200 MW oil/gas	729,270	474,026	304,635	1,300	1.183	360,390
50 MW oil CT	4,380	4,818	3,096	2,200	0.699	2,165
500 MW coal	3,723,000	3,909,150	2,512,237	2,100	0.732	1,839,827
200 MW oil/gas	648,240	405,150	260,372	1,250	1.230	320,346
100 MW gas	175,200	102,492	65,867	1,170	1.314	86,580
Total	9,106,020	7,002,197	4,500,000	1,538		4,500,000

Assume hypothetical "state budget" is 6,000,000 tons

Then, the allocation to sources would be 75% of state budget = 4,500,000

Budget allocation factor = 4,500,000 / 7,002,197 = 0.6426



Conclusions

- Carbon efficiency is more critical than simple heat rate efficiency
 - A 10,000 heat rate gas fired unit is 44% more carbon efficient than an identical 10,000 heat rate coal plant and 30% more carbon efficient than a 10,000 heat rate oil fired plant.
- By minimizing the cost risk to units often on the margin, overall LBMP energy prices will rise less – benefiting the rate payer
- Minimizing program compliance costs for the more carbon efficient units achieves more cost effective CO₂ and co-benefit emissions reductions