Background

On January 27[1], stakeholders, HIA academic advisory members and ARB/DPH staff convened to have a working session on the HIA. Topics discussed included (1) public health impacts of the proposed cap-and-trade rule; (2) HIA baseline; (3) potential alternative policy design choices and revenue considerations; and (4) proposed methodology. Given all the discussion, we ran out of time to discuss analysis priorities given the tight timeline. The HIA time during this CAT meeting is meant to be a continuation of the January 27 discussion and is proposed to begin with a discussion of priorities.

Timeline

The first draft of the HIA needs to be completed by the end of February 2010 in order to have the largest impact on shaping the revised Cap-and-Trade draft regulation.

Goal

At the January 27 HIA Stakeholder meeting, we ran out of time to discuss HIA priorities. We'd like to pick up the conversation at this point to discuss the most important priorities to evaluate in the first HIA draft.

Prioritization Areas, including suggested Staff Priorities

1) Policy Levers
   Priorities based on input that will best inform the next draft of the cap-and-trade regulation.
   a. Offset limit
   b. Recipients of proceeds
   c. Provisions to maximize co-benefits (trading restrictions)
2) Health Determinants
   Priorities based on determinants/outcomes with sensitive, specific and direct links to the cap-and-trade program.
   a. Air pollutant emissions
   b. Consumer economic impacts
3) Health Outcomes *(recommendation: # of outcomes assessed per determinant be ~equal)*
   a. Air-related: cardiovascular and respiratory hospitalizations, all-cause mortality; cardiovascular mortality; asthma and lower respiratory symptoms; acute bronchitis; work loss days; minor restricted activity days
   b. Qualitative discussion about effects of income, particularly related to low SES
   c. Other qualitative discussions as time permits
4) Analysis scale
   Priorities based on data availability and ongoing complementary analyses.
   a. Community level
   b. Statewide (economic analysis)

[1] http://www.arb.ca.gov/cc/ab32publichealth/meetings/meetings.htm#archive

5) Communities
   Priorities based on best available demographic, emissions and health data.
   a. Richmond to start (refinery is state's largest GHG emitter)
   b. One or two others, depending on sector locations (in South Coast and San Joaquin)
6) Sectors (i.e. all sectors in PDR section 95820)
   Priorities based on best available demographic, emissions and health data as well as items of public concern.
   Stationary sources (i.e. Facilities that emit 25,000 MTCO23/yr or more)
   a. Refinery
   b. Cement plant
   c. Others?

Drawing from the revised framework document, tables that incorporate all potential analysis areas are listed below for your reference

1) Policy Levers

Table 2. Alternatives to the Baseline Program Design Parameters for 2020

Type of Parameter	Baseline Assumption	Alternative Assumption	Reason for including Alternative
Percent of Allowances Auctioned	25% as a minimum in 2020	"Rely principally, and perhaps exclusively on auctioning." (100% auction) - EAAC Recommendation	• The percent of allowances auctioned (versus freely allocated) would affect the proceeds and could affect the carbon price.
Allocation strategy for freely allocated allowances (for 25% auction case)	Product output-based allowance allocation Output-based allowance allocation is when allocation is determined by how much of a product an entity produces (e.g. a power plant that generates more megawatt-hours (MWh) would receive more allowances than one that generates less energy) rather than its GHG emission levels.	Co-pollutant emissions would be considered in addition to product output when determining allowance allocation	• The goal of this alternative is to incentivize entities with high product output to reduce their co-pollutant emissions relative to their competitors. • Decisions about allowance allocation would be based on co-pollutant emissions per unit of product output. Where facilities with lower co-pollutant emissions, relative to their unit of output, would be given more allowances than entities with the same output, but higher co-pollutant emissions.
Recipient of Allowances and Proceeds		**EAAC Recommendations** A relatively small share of the total proceeds and revenue should go towards • Minimizing leakage • Low-income communities (households with an income below 150% of the poverty line) • Environmental remediation (co-pollutant	No recommendations pertaining to this topic were included in the PDR

1) Policy Levers			
Table 2. Alternatives to the Baseline Program Design Parameters for 2020			
Type of Parameter	**Baseline Assumption**	**Alternative Assumption**	**Reason for including Alternative**
		contingency fund) The remaining proceeds and revenue, which is expected to represent the bulk of the allowance value should go towards • ~ 75% Californians (cap-and-dividend) • ~ 25% Financing private and public investment o low cost emissions reductions o job training o adaptation to climate impacts o improvements to disadvantaged communities (half committee recommended Community Benefits Fund) o job training o infrastructure improvements o beneficial local and state plans (e.g. improvements to land use) **Other recommendations?**	
Mechanism to distribute proceeds or set-aside allowances		**EAAC Recommendations** Low-income households – direct transfer of allowance value Californians – lump sum (cap-and-dividend) or	No recommendations pertaining to this topic were included in the PDR

1) Policy Levers

Table 2. Alternatives to the Baseline Program Design Parameters for 2020

Type of Parameter	Baseline Assumption	Alternative Assumption	Reason for including Alternative
		individual income tax cuts	
Provisions to maximize co-benefits in the regulation		Trading restrictions (for allowances and offsets) • Determined by community and/or facility characteristics • See Boyce memo for examples of possible restrictions[2]	No recommendations pertaining to this topic were included in the PDR
Offset limit	4% of surrender obligation	No offsets	• The percent of offsets permitted could affect the carbon price (i.e. allowing more offsets increases the supply of compliance instruments available to entities which could decrease the carbon price). Changes in carbon price could affect consumer cost and/or household income. • The quantitative use limit on offsets could potentially affect the change in co-pollutant emissions • Increased use of offsets could impact health pathways associated with offsets projects

[2] This memo can be downloaded at:
http://climatechange.ca.gov/eaac/documents/member_materials/Boyce_memo_on_investment_in_disadvantaged_communities.pdf

2 & 3) Health Determinants/Outcomes

Health Determinant	Potential Health Impact	Relationship to Cap-and-Trade	Plausible Explanation
Ai r Pollutant Emissions	Cardiovascular and respiratory hospitalizations	Change in /foregone air pollutant emissions	For some impacts, air pollution exposure linked directly to stated potential health impact with a known concentration-response relationship and reasonable expected exposure change estimates; in other cases, discussion would be more qualitative
	ER visits		
	All cause mortality		
	Cardiovascular mortality		
	Respiratory mortality		
	Asthma and lower respiratory symptoms		
	Acute bronchitis		
	Chronic bronchitis		
	Work loss days		
	Minor restricted activity days (including school absence)		
	Non-fatal heart attacks		
	Child development		
	Premature birth		
Land Use/Transportation	Traffic counts, availability of public transportation, green space, visual impact; noise		Qualitative discussion of health effects associated with the built environment
	Diabetes	Location/type of offset projects (i.e. urban forestry)	Diabetes/obesity prevalence could change by 2020 due to increased walkability resulting from urban forestry offset projects
	Obesity	Location/type of offset projects (i.e. urban forestry)	
	Heat-related illness/death	Location/type of offset projects (i.e. urban forestry)	Heat-related illness/death could decrease (in community w/offset project) due to reduce heat island effect due to urban forestry projects

Health Determinant	Potential Health Impact	Relationship to Cap-and-Trade	Plausible Explanation
Consumer Economic Impact	% change in HH income , % change in HH costs like heating, etc.	HH income will decrease due to increased energy, etc, costs.	Qualitative discussion about effects of income and impacts of higher transportation and home heating costs, particularly related to low SES; might be able to tie % in HH income to change to life expectancy
Employment	% change in employment	Employment effects likely to be observed in regulated industrial sectors, non-regulated sectors that generate offsets, and sectors that serve regulatory compliance needs. Note that effects on regulated industrial sectors may be mixed—job loss from downsizing operations and job growth from changes in infrastructure and operations.	Qualitative discussion about effects of employment, particularly related to low SES
Social Impact	TBD	Regulatory programs can provide opportunities for social connections and indirectly influence well-being. C&T may exert some spatial variation on how the program influences overall neighborhood quality, stigma, local land values, family incomes, etc.	Qualitative discussion on health effects associated with social connections (literature is fairly robust but controversial)

4) Analysis Scale

- Statewide
- Regional
- Local

5) Communities

Table 3. California cities with 5 or more facilities subject to mandatory reporting

#	City
1	Antioch
2	Bakersfield
3	Fellows
4	Long Beach
5	Maricopa
6	Martinez
7	McKittrick
8	Pittsburg
9	San Diego
10	Wilmington
11	Yuba City

Table 4. California cities with Reported Total Emissions > 1,000,000 CO2e (metric tons)

#	City	#	City
1	Apple Valley	14	Moss Landing
2	Bakersfield	15	Pittsburg
3	Benicia	16	Redlands
4	El Segundo	17	Richmond
5	Escondido	18	San Jose
6	Fellows	19	Sun Valley
7	Herald	20	Sutter
8	Lebec	21	Torrance
9	Long Beach	22	Trona
10	Lucerne Valley	23	Tupman
11	Martinez	24	Victorville
12	McKittrick	25	Wilmington
13	Mojave		

6) Sectors (all sectors in PDR Section 95820)

- Facilities that emit 25,000 MTCO2e/year or more, e.g.:
- Electricity delivers
- Transportation fuel delivers
  (*Consider link between increased fuel prices & decreased VMT*)
- Natural gas and nature gas liquid delivers