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Cross Cutting Issues Technical Working Group
Draft GHG Inventories and Forecasting Design Characteristics Matrix

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For Reference:

Purpose and Goals of Inventories and Forecasts:

1. Tracking GHG emissions trends
2. Identifying opportunities and areas for action
3. Others?

#	Design Element	Options	Design Considerations	Preliminary Recommendation
1.	**Responsibility for Developing Inventory and Forecast**	• Sole responsibility with NC DENR Division of Air Quality (DAQ) • Shared responsibility between DAQ and other state agencies	• Strive for systematic development of inventory and forecast from one year to the next • Subject matter expertise	• DAQ should be responsible for all data manipulation and analysis for preparing inventories and forecasts for all sectors/sources • Other agencies should be explicitly responsible for related data and assistance
2.	**Inventory Period**	• Annual - Calendar - • Other	• Represents historical inventory of emissions • Define years covered and frequency • Should strive for consistency with other reporting programs	• Annual (TWG needs to consider if reporting period should be based on calendar or fiscal year) • TWG needs to decide on start year (e.g., 1990, 2000, 2002)
3.	**Forecast Period**	• Annual - Calendar - Intervals • Other	• Define future years for which emissions inventory is prepared (i.e., frequency and overall forecast period) • Define intervals for future year forecasts (e.g., annual, 5-year intervals relative to a base historical year) • Limitations associated with availability of activity data for projecting emissions (e.g., current Energy Information Administration (EIA) projections of fuel consumption are to 2030) • Consistency with other state and federal agency forecasts?	• Annual (TWG to decide on overall length of forecast period)

4.	**Greenhouse Gases Included**	• Six "Kyoto gases" (CO_2, HFC's, CH_4, N_2O, PFC's, SF_6) • Black Carbon	• Should strive for consistency with reporting program • Broader array promotes inventory building, public information, identification of GHG strategies, etc.	• Include the six "Kyoto gases" • No decision made on black carbon • Inventory should include mass emissions and CO_2e equivalent.
5.	**Basis for Calculating and Reporting Emissions**	• Production based • Consumption based	• Production refers to emissions generated by sources in-state (i.e., emissions associated with power generated in-state and consumed in-state or exported) • Consumption refers to "Production" based emissions plus imports and minus exports, at least for the energy sector	•
6.	**Emissions Quantifi-cation**	• Calculation methods & tools	• Should strive to use current best practice methods, such as *GHG Protocol* calculation tools, and to have consistency with other reporting programs. • Some "other" or "home grown" approaches may be necessary (e.g., Flashing emissions; IPIECA[1], API's[2] SANGEA™ GHG Emissions Software)	•
7.	**Public Access & Reports**	• Internet access and/or Online reports • Paper reports • Both	•	•

[1] IPIECA is the International Petroleum Industry Environmental Conservation Association.
[2] API is the American Petroleum Association.

8.	**Funding**	• State-funded • Emission-based fees (would require legislative approval). • Other? A combination?	•	•
9.	**Periodic Reassessment of Design Characteristics**	• Authority • Purpose • Frequency	• Purpose is to provide agency given responsibility for preparing the inventory and forecast with the authority to assess the utility of each design element of the inventory and forecasting program • Reassessment considerations: - Impact of sources or groups on emissions totals (is it useful to prepare annual inventory and forecast for sources with low emissions?) - Benefits to NC air, taxpayers, businesses? •	• Five-year intervals starting from first year of implementation of inventory and forecast program
10.	**Other?**	•	•	•