

SHRP C09: Incorporating Greenhouse Gas Emissions Into the Collaborative Decision-Making Process

presented to

**Strategic Highway Research Program 2 - Technical
Coordinating Committee for Capacity**

presented by

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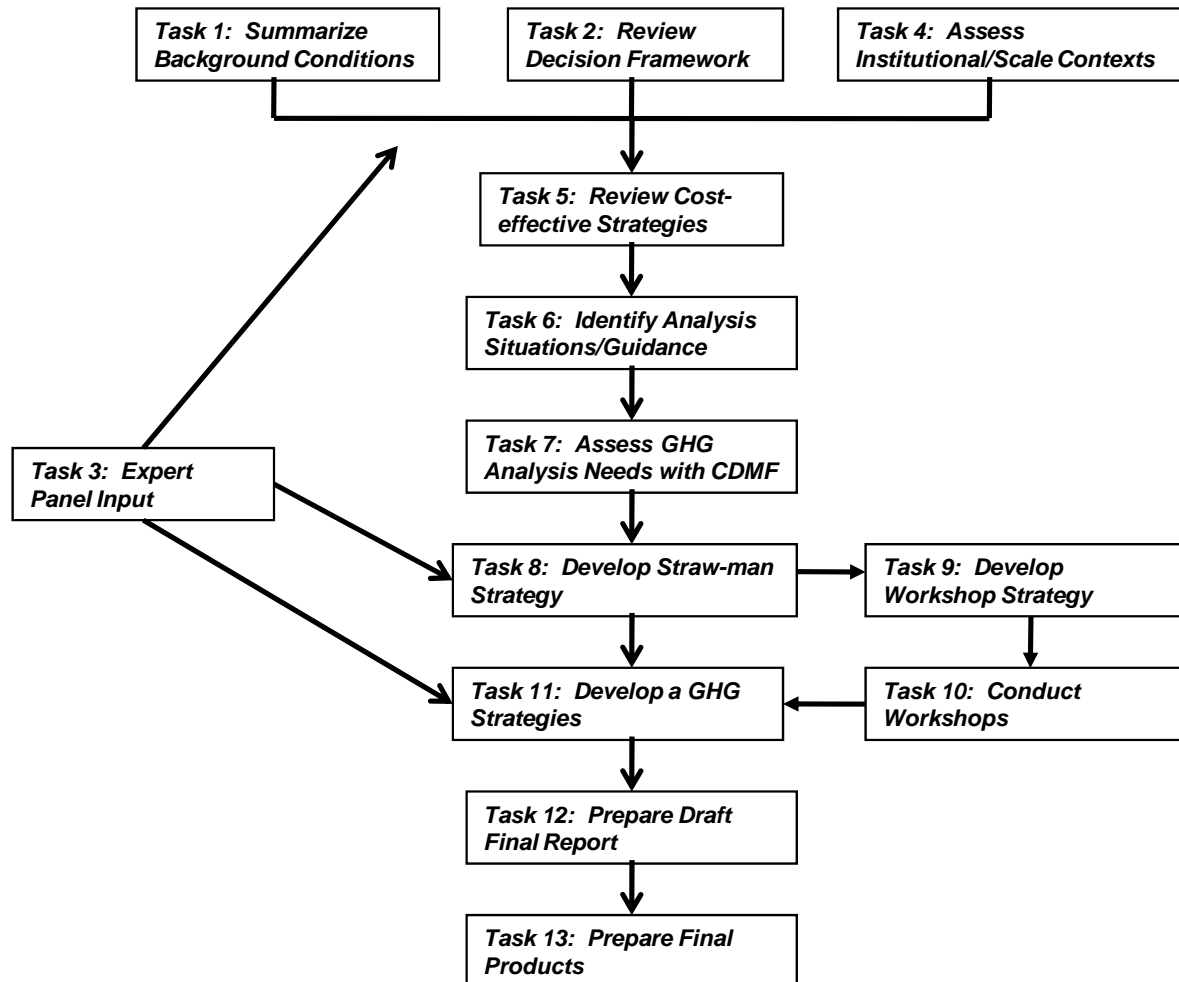
SHRP C09 – Project Team

- **PB Americas, Inc. – Dr. Michael Meyer, Principal Investigator**
- **Cambridge Systematics, Inc – Christopher Porter, Co-Director**
- **E.H. Pechan & Associates**
- **EuQuant**

SHRP C09 – Objectives

- **Develop strategies for incorporating GHG emissions in key points of the collaborative-decision making framework**
- **Identify relevant information and materials that are already produced by the transportation planning process and the gaps that exist for GHG analysis**
- **Prepare materials and methods for dealing with these gaps**
- **Prepare a Practitioner's Handbook that can be used in the planning and decision making process**

Project Approach



Tasks 1, 2, 5 – Review of Existing Research & Data

- **Task 1 – Summarize background conditions**
 - Key trends & uncertainties
 - GHG analysis tools
 - Transportation vs. other agency roles in reducing GHG
- **Task 2 – Review CDMF**
 - Look at other research products completed & in-progress
- **Task 5 – Review and Summarize Strategy Cost-Effectiveness**
 - Existing literature – e.g., McKinsey reports, NCHRP 20-24(59), IEA, Moving Cooler, USDOT Report to Congress

Task 3 – Expert Panel

- **Bring broad perspective to identify where and how GHG emissions analysis might be important in decision making**
- **Potential panelists: Anne Canby, Emil Frankel, David Greene, Charlie Howard, Alan Krupnick, Other???**
- **Input:**
 - **Initial input/brainstorming (Task 2 – review of CDMF)**
 - **Development of straw-man strategy (Task 8)**
 - **Development of GHG planning and analysis strategies (Task 11)**

Task 4 – Assess Institutional/Scale Contexts

- **Describe different institutional contexts and frameworks where transportation-related GHG analyses conducted**
 - **E.g., statewide climate action planning**
- **Identify different geo-spatial scales for GHG analyses (multi-state corridors, megaregions, etc.)**
- **Assess types of decisions intended to inform & types of information produced**
- **Summarize the importance of these contexts & frameworks from the perspective of the CDMF**
- **Identify ways to improve climate planning outside the transportation sphere & link with transportation planning**

Task 6 – Identify Analysis Situations/Guidance

- **Range of planning contexts:**

- **Statewide & metro long-range plans & TIPs**
- **Corridor/subarea plans**
- **Project development & environmental review**
- **Congestion management, operations, asset management, etc.**

- **Key issues:**

- **Analysis timeframe**
- **Construction, maintenance, & facility operations**
- **Vehicle operations**
- **Capacity expansions & effects**
- **Secondary & cumulative impacts**
- **Mitigation strategies**

Task 7 – Assess GHG Analysis Needs

- **Build on Task 6 framework to identify appropriate data sources, analysis tools, methods for different situations**
- **Key types of data:**
 - **Travel demand data**
 - **Operational data**
 - **Energy consumption data**
 - **Emission factors**
 - **Non-road data**
- **Product: Reference document that allows an analyst to select the situation and decision point being evaluated and review procedures and options available**

Task 8 – Develop Straw-man Strategy

- **Develop menu of straw-man strategies that can be linked to key decision points in the CDMF**
- **Strategies will define:**
 - Different types of policies/actions
 - Needed analysis tools and data
 - Institutional relationships
- **Examples of key issues:**
 - Incorporating GHG without undermining streamlining
 - Incorporating cost-effectiveness information
 - Linkages with local land use planning

Tasks 9 & 10 – Workshops

- **Workshops in at least 4 states w/transportation GHG planning activity**
- **Potential agenda items:**
 - **Introduction to the CDMF and straw-man strategies**
 - **Discussion**
 - **Systems planning, pre-programming studies**
 - **Programming and environmental review**
 - **Design and permitting**
 - **Missing institutional relationships, analysis tools, information requirements, etc.**
 - **Recommended changes to straw-man strategies**

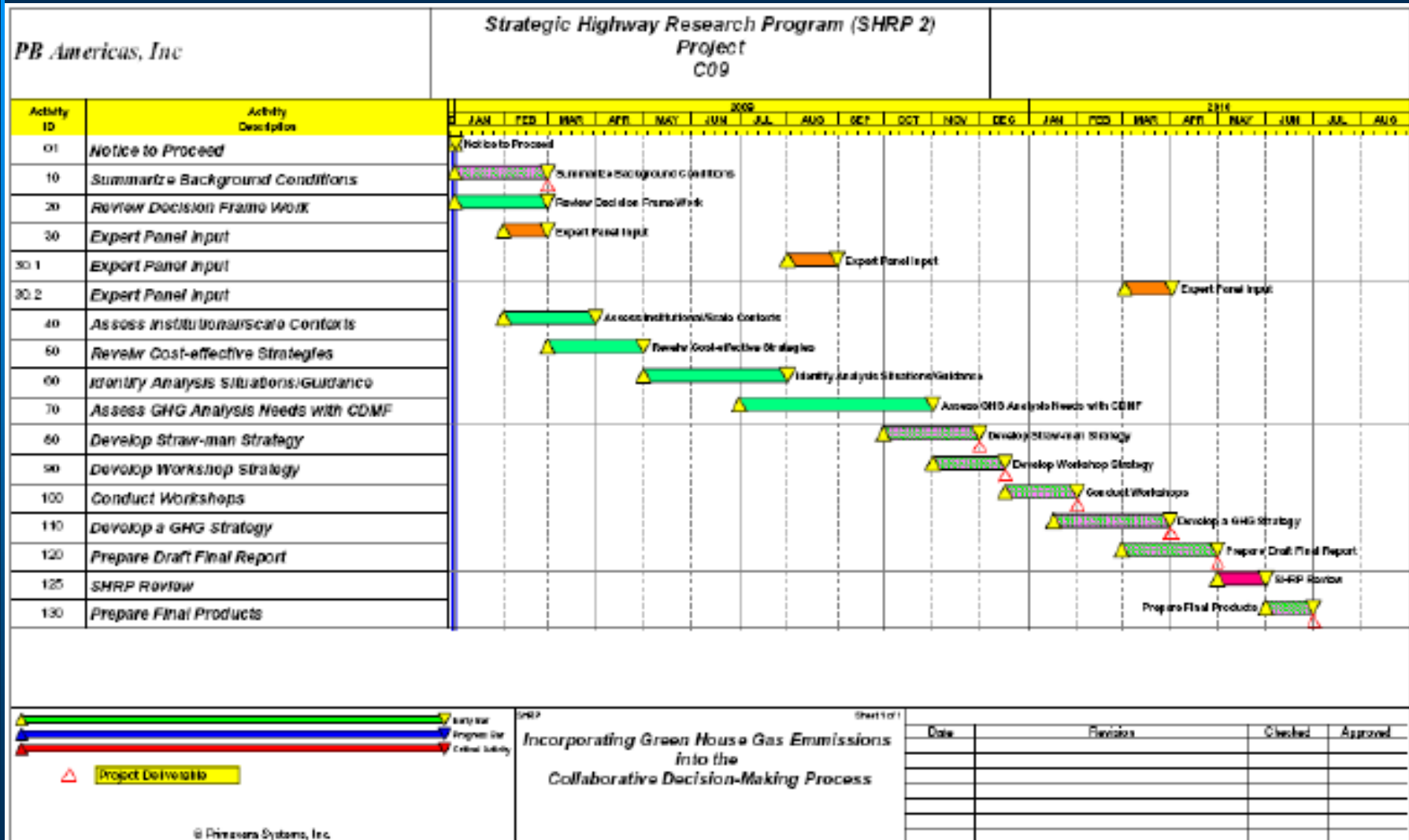
Task 11 – Develop GHG Strategy for the CDMF

- **Finalize GHG strategy for each key decision point & incorporate in handbook/Web tool**
- **“Clicking” on a key decision point would:**
 - **Provide the user with information on how to incorporate GHG considerations into that KDP**
 - **Multiple levels of detail**
 - **Provide linkages and references to other parts of the CDMF that led up to that point and that follow**

Task 11 – Potential Handbook Outline

- **Introduction, Organization and Purpose of Handbook**
- **Overview of CDMP & Transportation/GHG/Climate Change Relationships**
- **Stage of Process 1 to “m” (e.g., Long Range Plan...)**
 - **KDP 1 to “n”**
 - **Roles and responsibilities of the formal decision makers with respect to GHG**
 - **Stakeholder/project champion roles and relationships with respect to GHG**
 - **Supportive data, tools, and technology for considering GHG emissions**
 - **Related influencing and sub-processes**
 - **Primary products of this step and role of GHG analysis**
 - **Associated best practices with considering GHG emissions**

Time Schedule



Discussion

