



**Workshop
Economic Analysis
Scoping Plan Workshop**

May 19, 2008

California Air Resources Board

Overview

- Background
- Energy 2020 Model: Base Case
- Environmental Dynamic Revenue Assessment Model (EDRAM)
- Berkeley Energy And Resources (BEAR)
- What's Next?

Background

- AB 32 Requires Economic Analysis
- Role of Economic Analysis
- Previous Meetings on Economic Modeling
- Multi-Model Path for Analysis
- Bottom-up and Top-down Types of Models
- Current Status of Modeling

Role of Economic Analysis

- To Assess Potential Impacts of GHG Emission Reduction Policies
- To Be Used as an Input into Board's Decisions
- Important Factors Models Can Help Address:
 - Jobs impacts
 - Income impacts
 - Costs
 - Business Impacts
 - Low-income Household Impacts
 - Emission Reductions

Multi-Model Path for Analysis

- Three economic models to support analysis
- No single model will address all needs
- Each model can provide useful information
- Models can also work together to inform certain policy options

Multi-Model Path for Analysis (Energy 2020 Model)

- Multi-sector model of energy demand, supply, and prices
- Policies disaggregated down to devices and processes
- Evaluation of effects at end-use level
- Results rolled up to sector level
- Bottom-up Model

Multi-Model Path for Analysis (E-DRAM and BEAR)

- EDRAM and BEAR
 - Computed General Equilibrium
 - Policies aggregated to sector levels
 - Evaluation of effects at the sector level
 - A top-down Approach
- Can Be Run Independently
- Both Models Use Similar Data for Development
- Sector Details Differ
- BEAR Accounts for Technology Changes Over Time

Multi-Model Path for Analysis

- Model Integration
 - Energy 2020 investment, prices, and expenditures for
 - Input into EDRAM and BEAR
 - Results
 - Impacts on Jobs
 - Impacts on Income
 - Impacts on Output

Current Status of Modeling

- Energy 2020 Modeling
 - Business-As-Usual
 - Evaluation and basis for scenarios
 - Scenario development
 - Cap and trade
 - Carbon fee
 - All direct regulations
 - Effects of offsets

Modeling

- Intended to Evaluate Policies Relative to Each Other
- Base Case Does not Need to Calibrate Exactly but Rather Approximate Accepted Projections
- Sector Mapping of Energy 2020 to California Data
- Transportation Characteristics
- Emissions Projections

Today's Workshop

- Base Case Discussions
- Top-down Scenario Modeling Methodologies
 - Core Measures, and
 - Cap and Trade
 - Carbon Fees
 - All Direct Regulations