

# 2013 IEPR Common Cases Introduction and Overview

**2013 IEPR Workshop**

Hearing Room A

February 19, 2013

Ivin Rhyne

Electricity Analysis Office

Electricity Supply Analysis Division

Ivin.Rhyne@energy.ca.gov / 916-654-4838

California Energy Commission

**DOCKETED**  
**13-IEP-1L**

TN # 69760

MAR 01 2013



# Introduction

Topics to Cover:

- Developing IEPR “Common Cases”
- Overview of Common Case Methodology
- Common Case Input Assumptions



# Purpose of IEPR “Common Cases”

- Energy sectors serving California are complex, interdependent systems
- Led to “fractured” analytical approaches



# Providing Solid Analytical Basis for Cross Cutting Issues

- Three cases that easily translate across sectors
- Stronger analytical basis for policy discussions
- Integrated modeling requires vast resources
- Staff expanded coordination started in 2011



# Common Cases Require Common Definitions

- Defining cases key to coordination
- “High” & “Low” not specific enough
- Three worldviews chosen to model
  - Reference Case or Business as Usual
  - High Energy Consumption Future
  - Low Energy Consumption Future

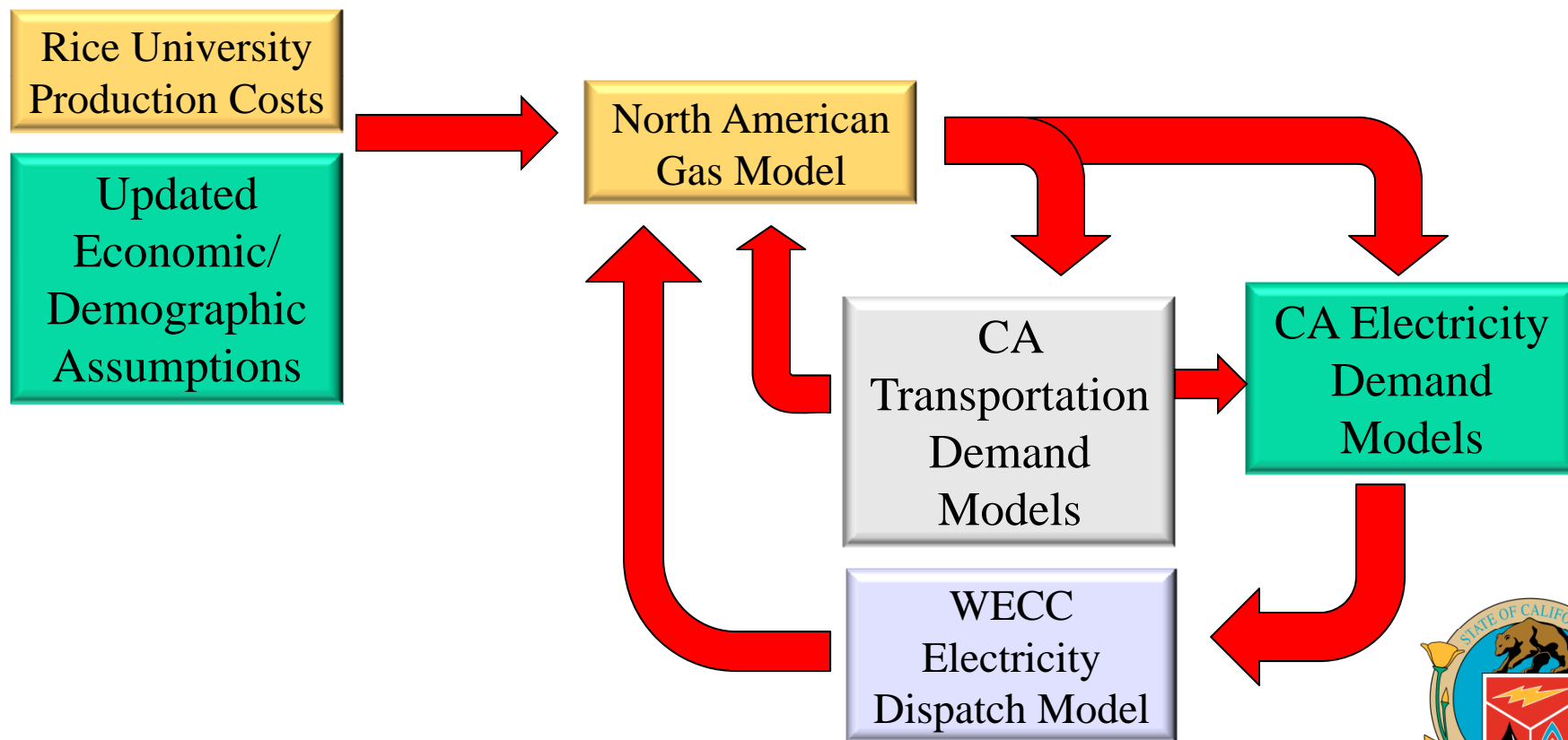


# **2013 IEPR Common Cases Begin With 2012-2022 IEPR Demand Forecast**

- Modeling requires starter values
- Recent natural gas production cost curves
- Updated economic and demographic data



# Graphical Representation of Iterative Modeling Process



# Common Case Input Assumptions

- Gross Domestic Product Growth
- Inflation
- Gross State Product
- Population Growth
- Energy Efficiency Improvements
- Demand Response
- Carbon PricesWeather (HDD/CDD)





# Trade-Offs in High and Low Energy Consumption Cases

- High and Low Consumption Scenario for one sector comes at expense of other sectors
- Some trade-offs necessary in defining high and low cases
- Chosen approach was “Major Driver” test
- If input value was major driver in one model but not others, value set by model where major driver



# Resolution of Conflicting Variables

## Variable

- Electricity Price
- NG Price
- Crude Oil Price
- EV Penetration
- Coal Price
- NGV Penetration

## Controlling Model

- Electricity
- Natural Gas
- Transportation
- Transportation
- Electricity
- Transportation



# Understanding Scenario Results

- Reference Case reasonably expected trajectory given best available input
- High and Low Cases Energy Consumption cases are reasonable range
- High and Low Cases Energy Consumption are NOT most extreme possible



# Next Steps

- Staff will gather feedback from stakeholders
- Refine inputs case definitions
- Each modeling group will build other scenarios as needed



# Questions?

