CCA FEASIBILITY STUDY FOR ALAMEDA COUNTY

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MRW & Associates

THE MRW TEAM

MRW & Associates
Experts in California wholesale power market, Ratemaking, CCA formation, and "PCIA" exit fees

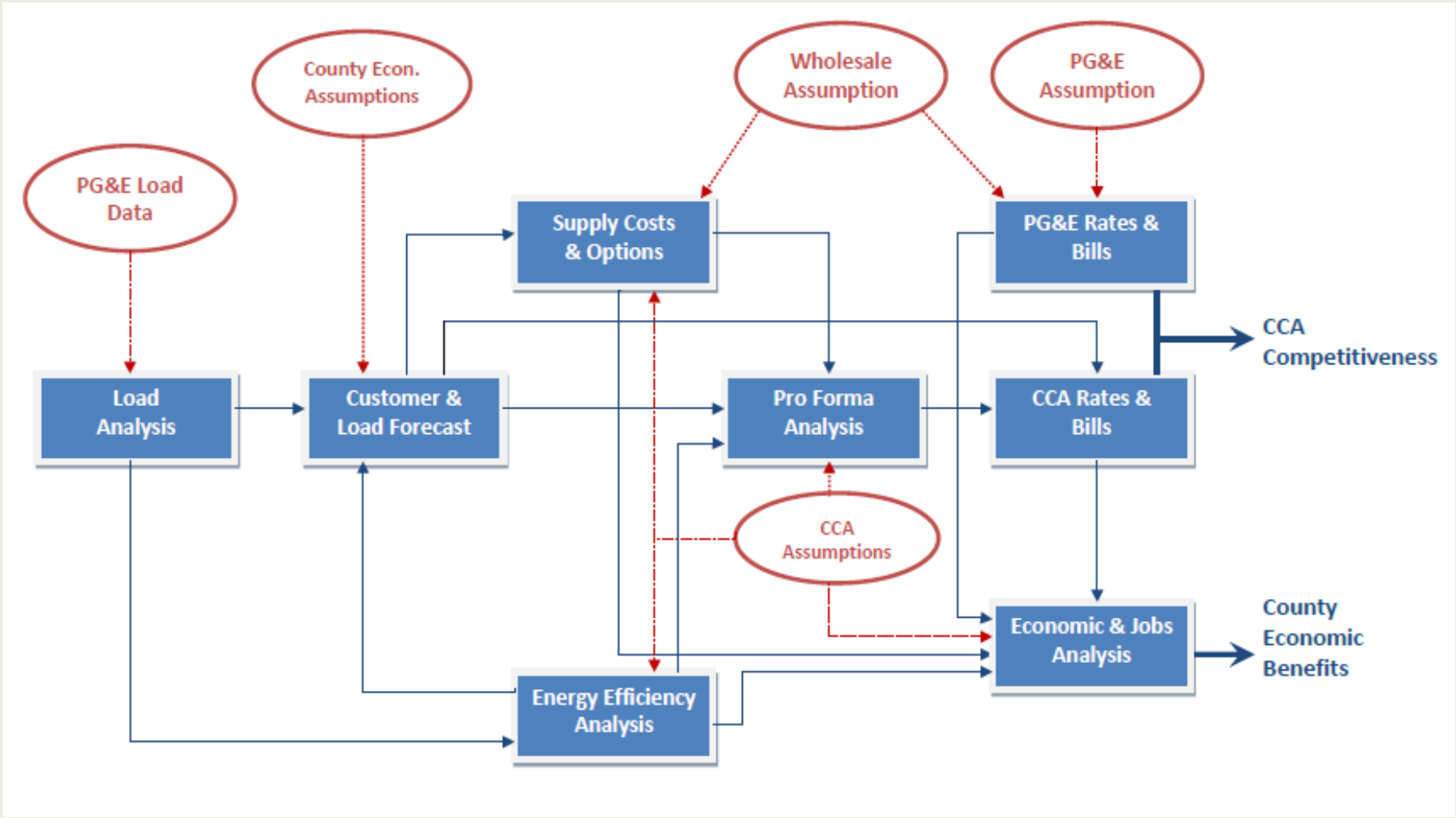
Tierra Resource Consultants
Experts in energy efficiency forecasting, program design, development and implementation

EDR Group
Economic and jobs assessments, Application of dynamic REMI model for forecasting impacts

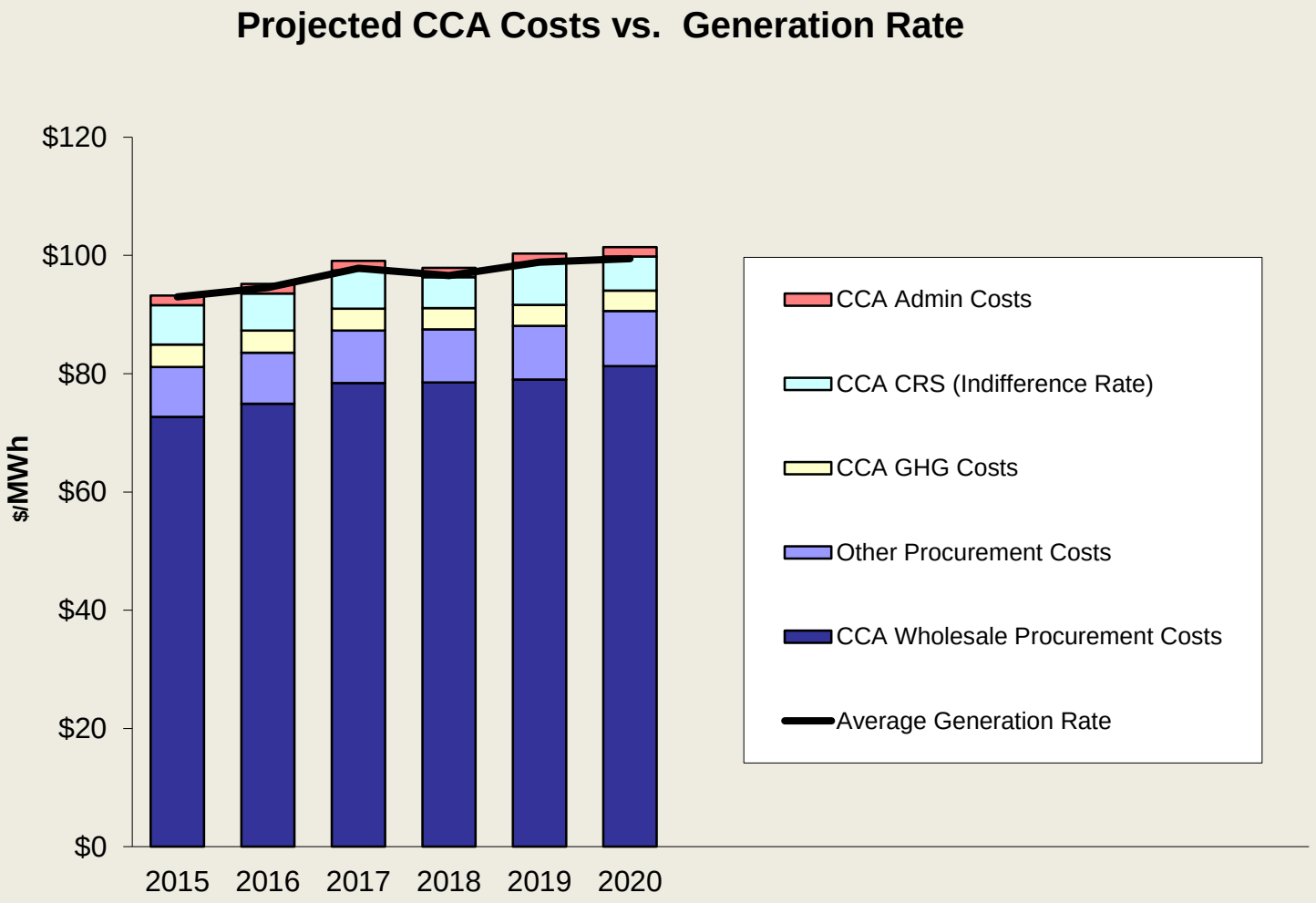
APPROACH

- Use existing load analysis models
- Use existing financial/rate forecasting models
- Build on CCA risk assessment experience
- Develop Supply, EE, DR scenario inputs
- Use REMI Model to assess economic and job impacts
- Good communication with Alameda County CDA

ANALYSIS MAP



TECHNICAL ANALYSIS



DSM ENVIRONMENT

Efficiency & Demand Response Market Profile

What's out there and how might the Alameda CCA fit in?

- Pending and newly enacted Legislation
- Programs/Initiatives from PG&E, BayREN, Local Governments, the State
- What priorities are coming from the CPUC?
- What providers of EE services are in the County?

Literature Review

What programs being implemented elsewhere that may be relevant to Alameda County CCA?

DSM ENVIRONMENT

Get Stakeholder Perspectives

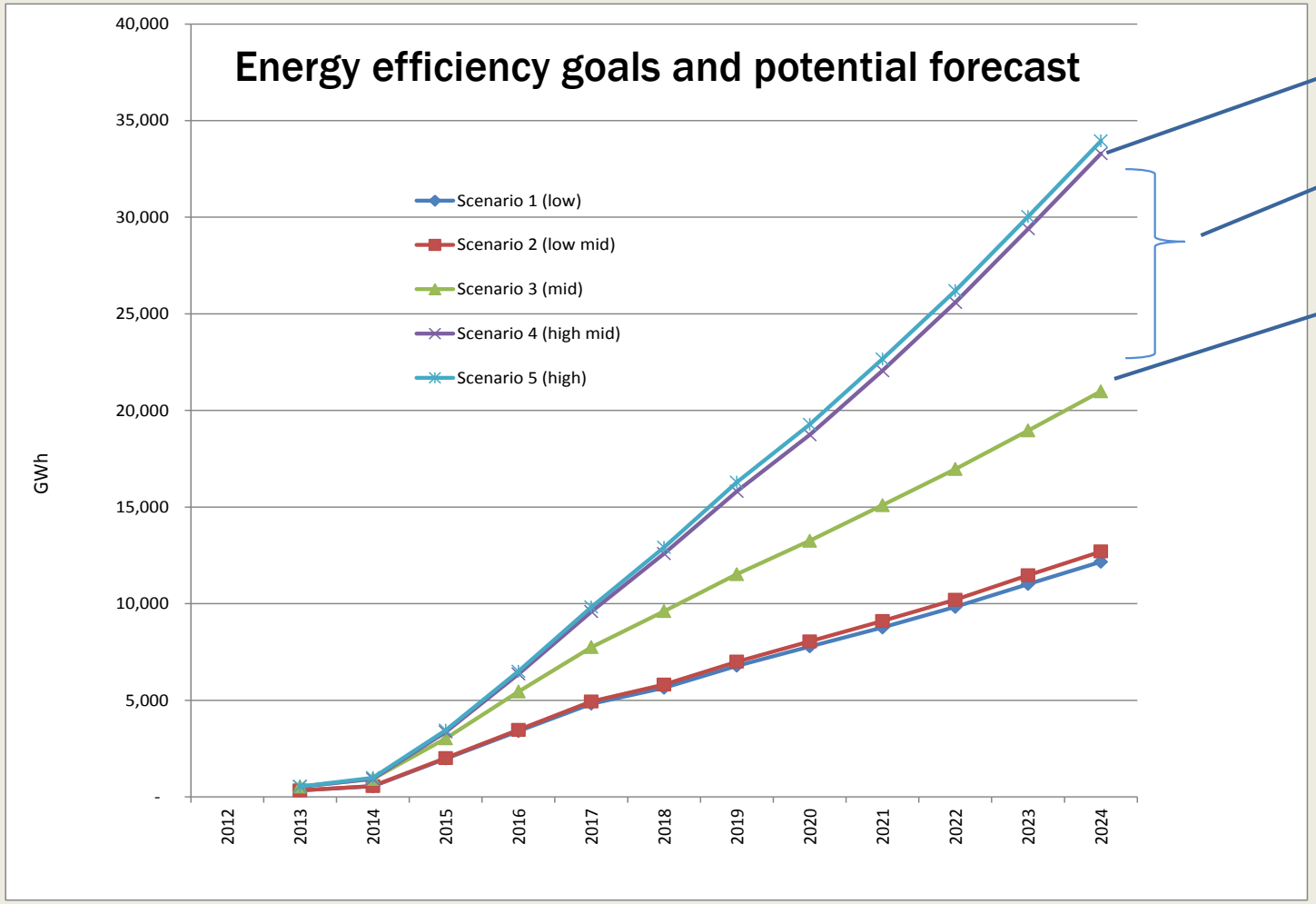
Interview/provide questionnaires to local stakeholders:

- Local and county government agency representatives
- Large state/federal users (e.g., UC, National Labs)
- Other CCAs
- EE/DR industry service providers

Develop Scenarios for Modeling

- Based on model used by CPUC to estimate energy efficiency potential
- Provide dollar, kW and kWh reductions to the modeling team

DSM ENVIRONMENT



SB350

Local initiatives contributing

IOU goals

SUPPLY SCENARIOS

1. Minimum RPS Compliance: 33%⇨50% qualifying renewables
2. More Aggressive: Initially 50% with lower GHG emissions
3. Ulta-Low GHG: 50%⇨80% by year 5

How much local renewables will depend upon costs and potential

WHAT CAN THE REGIONAL ECONOMIC FORECAST MODEL DO?

- Understand how the scenario's *locally procured* investment translate into annual direct jobs by industry type, and multiplier jobs by industry type.
- Understand how the scenario's change on electricity prices (relative to business-as-usual) converts into annual job changes by industry type
- Portray the pay quality of the affected jobs
- It can not - on its own - know the extent of any revenue off-set to local generating units (this must come from scenario assumptions)
- It does not distinguish whether a job is union or not

JOBS ANALYSIS

Forecast jobs (direct & multiplier) based on the proposed CCA structure and the region's economic conditions

Policy-driven investment apportions into a basic profile

- $ installation labor
- $ on manufactured components
- $ with distributors & other suppliers

Profiles will vary depending on:

- energy-efficiency & intended end-use
- Renewable type (e.g., small DG, larger DG, utility-scale renewables, etc.

SUPPLEMENTAL INFORMATION TO INFORM THE JOBS ANALYSIS

If a scenario is to address implications on union jobs (+ or -), the client-contractor team will need to refer to recent CA CCA's for instances of Project Labor Agreements as well as the extent of union job exposure amidst lost sales at local electric generating unit.

SCENARIO INPUTS

Short-term Influences (*deployment*)

- Program Spending
- *Participant Out-of-Pocket*
- *Expenditure on Improvements (split, equipment vs labor)*
- *Equipment manufacturing – in county, in State or out-of-state?*

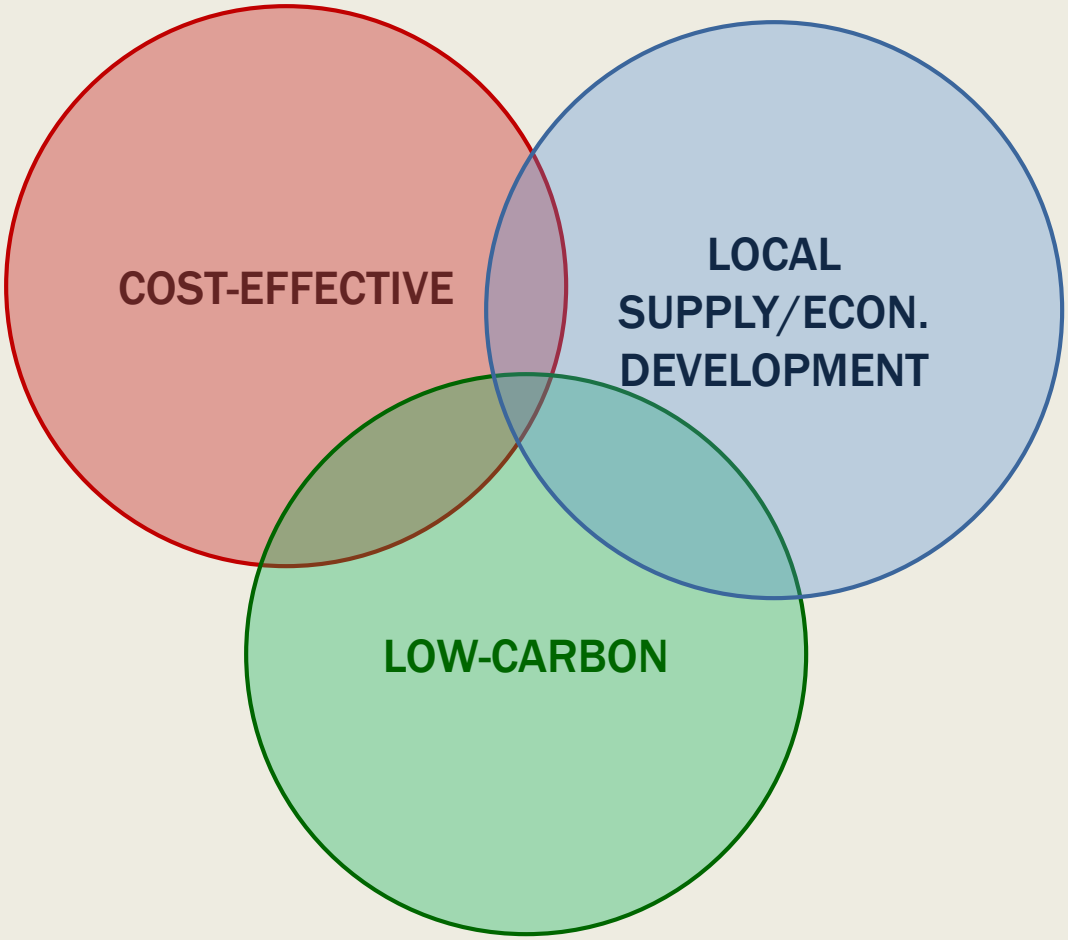
Longer-term Influences (over the *useful life of devices*)

- Participants' bill savings
- Utility sector off-sets from reduced load.
- Ratepayer effects (e.g. DRIPE if relevant, other)

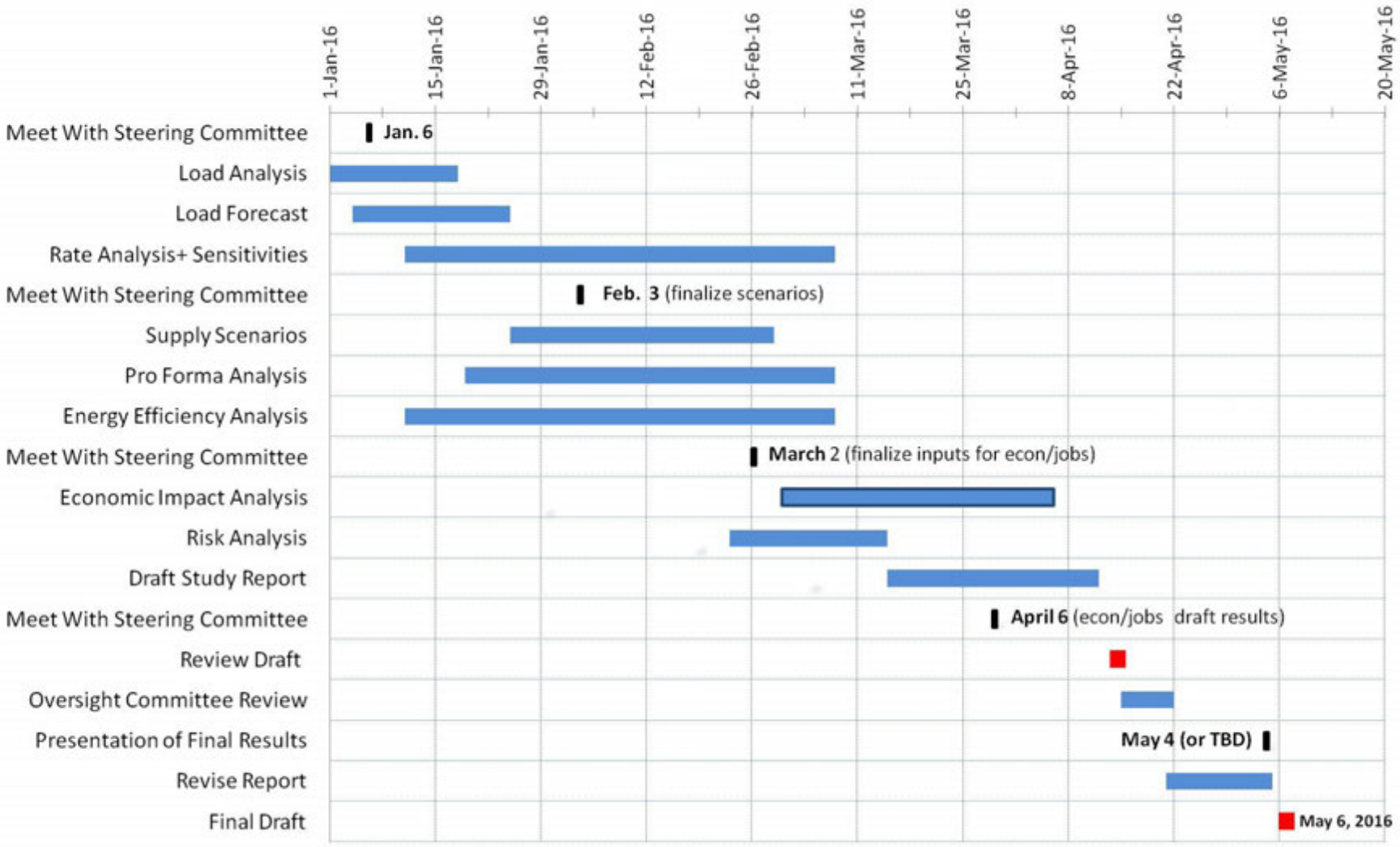
UNDERSTANDING THE RISKS

- Financial
  - How much does the CCA need to collect to cover expenses?
  - Can the CCA do this at rates that are “competitive” with PG&E ?
- Regulatory
  - CCA still has some CPUC oversight: procurement, exit fees
  - Legislation can change everything
- Community
  - Will the implemented plan deliver what was promised including for local resident labor force?

BALANCING PRIORITIES



SCHEDULE


1-Jan-16
15-Jan-16
29-Jan-16
12-Feb-16
26-Feb-16
11-Mar-16
25-Mar-16
8-Apr-16
22-Apr-16
6-May-16
20-May-16
Meet With Steering Committee
Jan. 6
Load Analysis
Load Forecast
Rate Analysis+ Sensitivities
Meet With Steering Committee
Feb. 3 (finalize scenarios)
Supply Scenarios
Pro Forma Analysis
Energy Efficiency Analysis
Meet With Steering Committee
March 2 (finalize inputs for econ/jobs)
Economic Impact Analysis
Risk Analysis
Draft Study Report
Meet With Steering Committee
April 6 (econ/jobs draft results)
Review Draft
Oversight Committee Review
Presentation of Final Results
May 4 (or TBD)
Revise Report
Final Draft
May 6, 2016

QUESTIONS?

EXTRA SLIDES

ECONOMIC/JOBS ANALYSIS

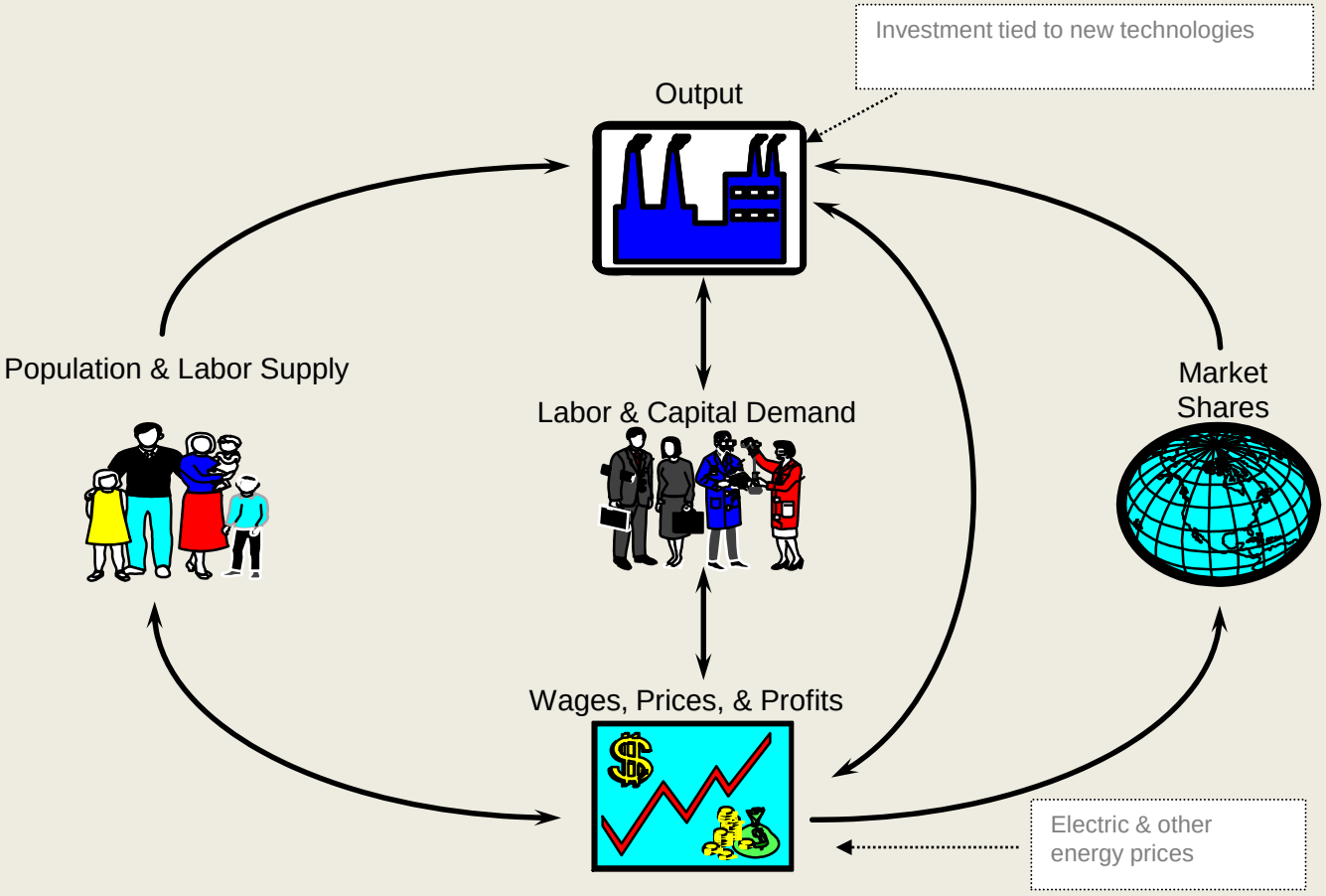
- REMI dynamic *impact* forecasting model that uniquely handles *cost (& rate) changes* that arise on non-residential customer segments…in addition to everything that a static input-output model approach can provide – HH income changes and program related spending shifts.

- *Direct* jobs will come from the investment composition of the MRW team defined scenario(s) and sensitivities for local labor utilization

- *Non_direct* jobs result from the REMI model's region-specific cost responses on C/I segment *competitiveness* & then a traditional set of multiplier effects

- Annual impact results over the *BAU*: *Jobs, Wages, Sales, GSP, Exports* (and many more) in aggregate and by industry type

REMI'S CORE LOGIC



IMPACT ANALYSIS IN REMI