



Climate Change Scenarios for California: Overall PIER Strategy and Perspective

October 28, 2004

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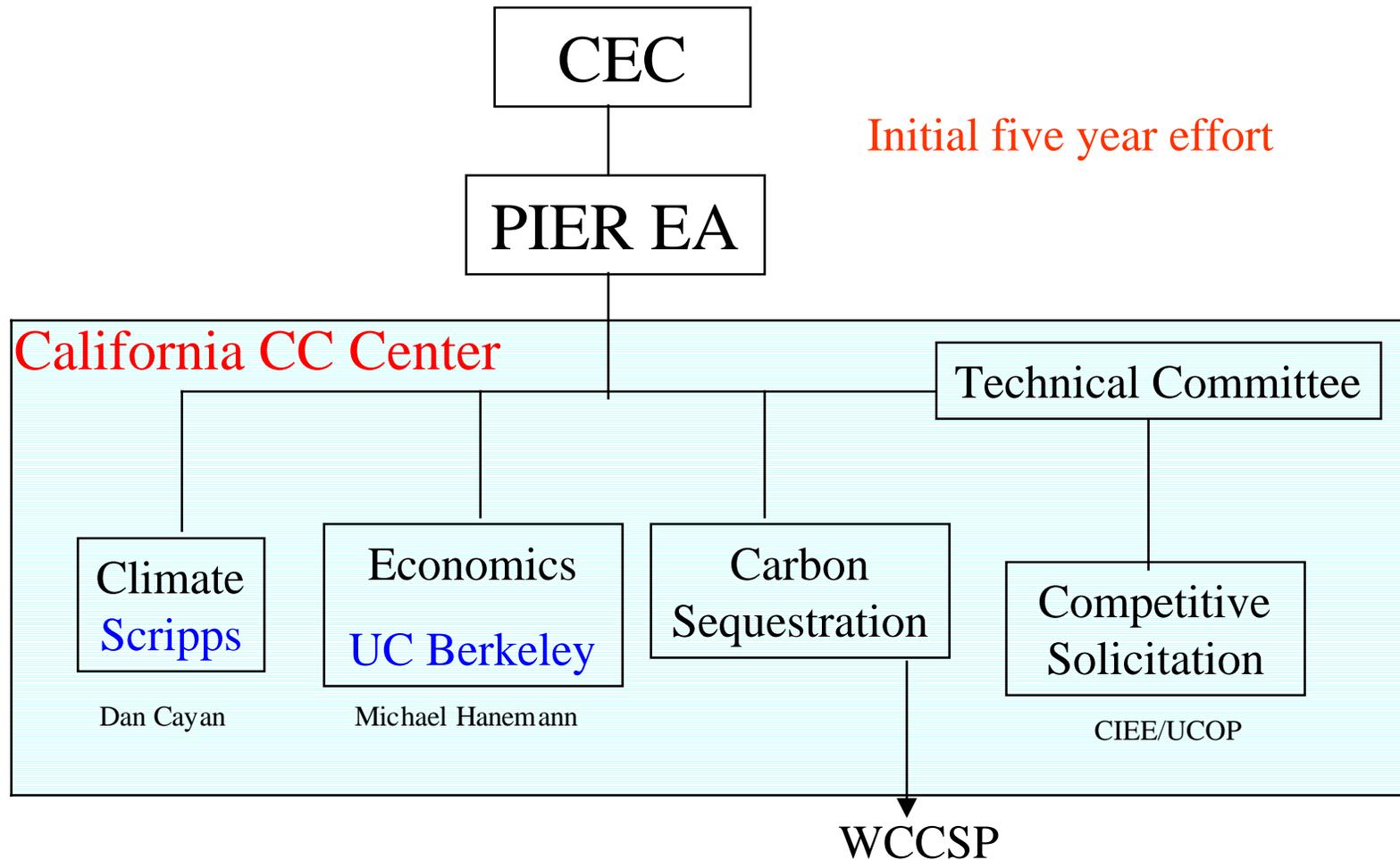


Background Information

- Roadmaps of research
- Climate Change Research Plan
http://www.energy.ca.gov/pier/final_project_reports/500-03-025fs.html
- We are implementing the plan through the the California Climate Change Center



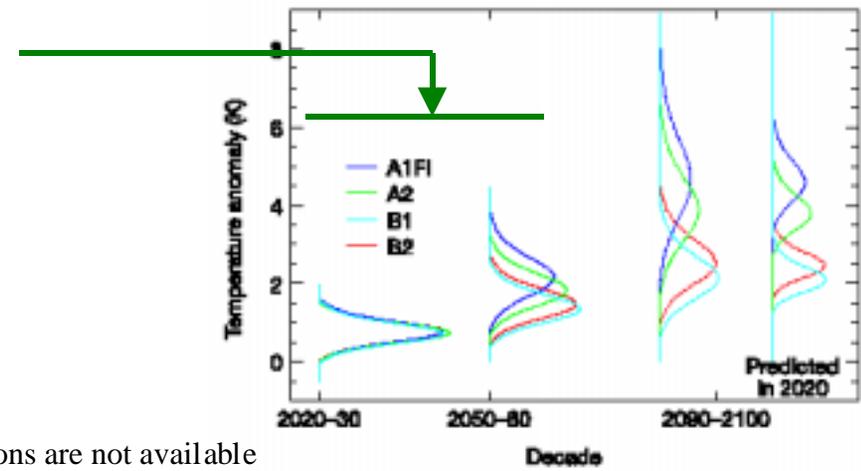
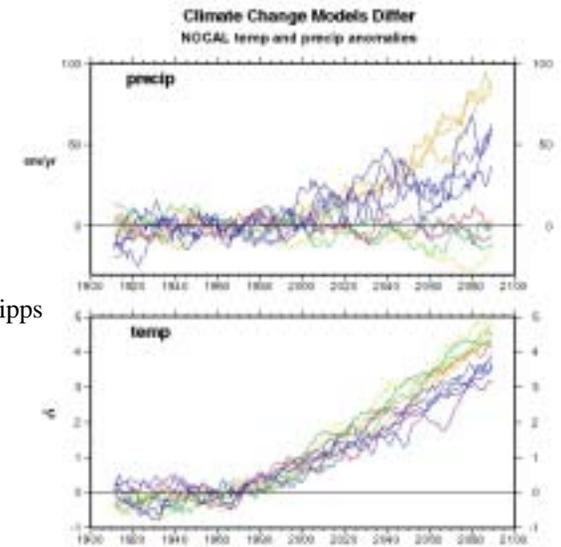
CA Climate Change Center



Is There a Need for Probabilistic Projections?

- It is very difficult to develop robust adaptation strategies* when we do not know if it is going to be wetter or drier
- Are there at least relatively narrow probability bands for the next few decades?

Source: Scripps



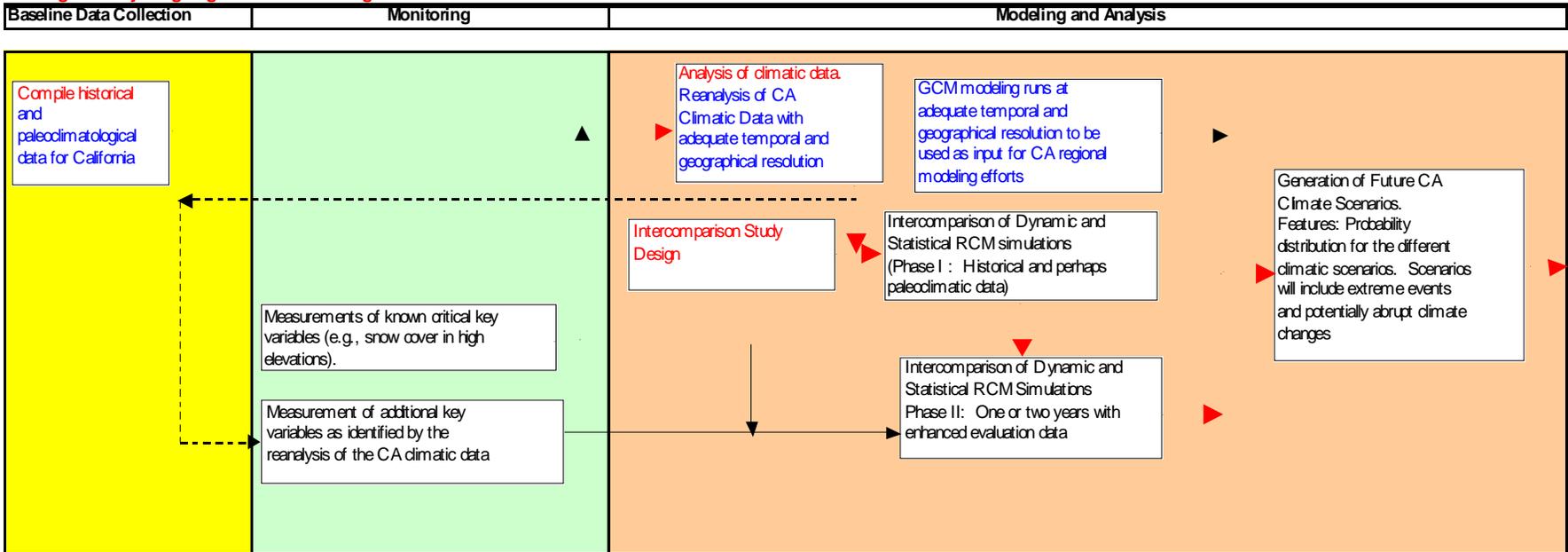
* Please note that this does not mean that “no regrets” options are not available



Climate Scenarios for California



Sensing and Projecting Regional Climate Change in California



Red = Tier I (project in the critical path and when PIER may provide most of the funding, if needed)

Black = Tier II (PIER and outside funding)

Blue = Tier III (mostly outside funding)

• Critical Path



Preparatory Work (examples)

- Input Needs for Downscaling Global Models to Regional Scales (Tom Wigley. NCAR)
- From Climate Change Spaghetti to Climate Change Distribution (Mike Dettinger. Scripps)
- Protocol on How to Inter-compare Regional Climate Models (Phil Duffy et al., LLNL)
- **Role of Aerosols on Climate in CA (Mark Jacobson. Stanford)**
- Climate Detection and Attribution Study for the California Region (Ben Santer et al., LLNL)
- Role of Urbanization and Irrigation on Climate (Regional modelers from Scripps, LBNL, UC Davis, and Santa Cruz)
- Use of Satellite Data to Study the Effect of Aerosols on Precipitation in the Sierra Nevada (Rosenfeld et al. Hebrew University, Jerusalem)



Final Remarks

- We are working very closely with other state agencies (e.g., DWR, CDFR, and ARB)
- Future climate scenarios will be used for research and planning work in the state to address climate change concerns