

4TH CALIFORNIA CLIMATE ASSESSMENT: OPPORTUNITIES FOR COLLABORATION **(3J)**

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Executive Order #S-3-05 signed in 2005 mandates the generation of periodic assessments about the potential impacts of climate change as well as the status of mitigation and adaptation responses in California. Since then the State of California has commissioned three assessments managed by the California Energy Commission's PIER Program. The first assessment released in 2006 helped support the passage of AB32. The second assessment released in 2009 attempted to provide initial estimates of the economic impacts of climate change. It tentatively concluded that adaptation – as a complementary approach to mitigation – could substantially reduce economic impacts (losses and damages). The latest assessment released in 2012 – shaped by the request for more information on vulnerability and adaptation options articulated in the first California Adaptation Strategy (2009) – made significant progress in projecting climate change impacts, but also in better understanding the interactions of those potential impacts with on the ground exposure, sensitivity and response capacity of natural and human systems. It thus identified key vulnerabilities in a range of sectors, advanced thinking about adaptation options, but also identified potential barriers to adaptation due to regulatory, legal, institutional and other factors. As California begins to think about the foci of the Fourth Climate Assessment, it should consider how it can both advance the state of the science – thus feeding into national and international assessment efforts – and serve the growing needs of its own state- and local-level decision-makers. Key issues concern increases in the frequency and intensity of certain kinds of extreme events, possible major system shifts, and potentially hard-to-reverse tipping points, the need to explore transformative mitigation and adaptation efforts, and the growing recognition of the importance of the social sciences for climate change research. Although the Energy Commission's R&D program has been directed to narrow its climate research to energy-related impacts and solutions, the State of California is still committed to continuing to advance our understanding across all sectors. To complement the areas to be covered by the Energy Commission, the State will actively seek partners to enhance the overall study. This collaboration station will initiate that conversation with potential partners.

Key words: climate scenarios, vulnerability assessments, climate change impacts, economic Impacts and costs of adaptation, barriers to adaptation