*Note: this post is co-authored with Fan Dai, director of the University of California's California-China Climate Institute.*



Authors Fan Dai and Ethan Elkind at COP 25 in Madrid last week

With the high-profile failure of last week's UN climate conference in Madrid, the focus of international action on climate change will need to shift to political leaders of key global economies. We attended the conference in Madrid on behalf of the UC California-China Climate Institute and the Center for Law, Energy and the Environment (CLEE) at UC Berkeley Law and saw firsthand how California and China may now be well positioned to lead in this global leadership vacuum. Both jurisdictions have dominant economies and official commitments on climate action, as well as strong willingness to act at the local levels.

An alliance of the "willing" among these leading economies, however, will not be easy. China and California both face headwinds to strong climate action. First, China is facing internal leadership changes on climate amid fears of a slowing economy, which is pushing the national government to scale back climate commitments. Most prominently, longtime government climate policy maker Xie Zhenhua is stepping down, while Ministry of Ecology and Environment vice minister Zhao Yingmin takes over. Xie's departure coincides with a shift in China's climate policy away from its economic-focused National Development and Reform Commission towards its traditional environmental protection ministry, with unknown consequences for

future climate action.

These bureaucratic changes are happening at the same time that China is delaying introduction of its new national emissions trading system and returning to support more coal development to boost its economy. The numbers bear this reality out: China has raised its coal-fired power capacity by about 4.5% in 2018-2019, while oil consumption increased by an average 5.5% in 2018 and over the previous decade. Meanwhile, sales of electric vehicles dropped 34.2% in September 2019 compared to the previous year, as the country phased out subsidies.

Meanwhile, California's aggressive climate agenda proved successful in this past decade, with the state meeting its 2020 climate goals four years early in 2016. But headwinds from the federal government, including a proposed rollback of federal vehicle fuel economy standards, means the state faces uncertainty reducing emissions from its now-dominant transportation sector. That sector now constitutes approximately 50% of the state's carbon emissions, when factoring in oil refinery emissions. Worse, vehicle driving miles in the state are increasing, due to inefficient local government land use policies encouraging sprawl over transit-oriented growth.

To meet the 1.5-degree goal under Paris agreement, both California and China need to decarbonize their economies and be on a path to carbon neutrality by mid-century, with China needing to achieve a decline in emissions by the 2030s. Given the absence of US national leadership and now international discord as seen in Madrid, both California and China will need new partnerships to advance their climate programs. Specifically, the two climate leaders could lead collaborative efforts on:

- Cap-and-trade program: Given California's success rolling out a functioning cap-and-trade program, the state is well positioned to provide technical assistance for China's nascent carbon trading program, especially around monitoring, reporting and verification of emission data, consignment auction, and exploring potential market alignment under scenarios where the programs are linked by degrees.
- Zero-emission vehicles and low-carbon transportation: California leads the U.S. in adoption of zero-emission vehicles, particularly battery electric models, while China is now a dominant manufacturer of both the vehicles and their batteries. The two jurisdictions could share knowledge regarding smart policies for deployment as well as how to better integrate their markets to reduce costs for consumers while boosting local jobs. Collaboration over electrification of

heavy-duty vehicles and ports in particular could be mutually beneficial.

- Clean energy innovation and grid modernization: California and China are both deploying significant renewable energy, such as solar and wind power, and now face challenges integrating this variable renewable energy into their grids. Both jurisdictions can benefit from technology and policy exchanges to boost deployment of solutions like energy storage and technologies that can match electricity demand to intermittent supply.
- Nature-based climate solutions: Facing common challenges posed by climate change to their ecosystems, California and China can learn from each other how to deploy nature-based solutions to manage our forests, farmlands and natural lands to sequester carbon and be more resilient to increasingly severe impacts of climate change.

The UC California-China Climate Institute can help advance this coordination and assist China and California in partnering with other climate leaders in the US and around the globe, through its policy research, dialogue and training programs. As the federal government in the U.S. retreats from climate leadership, and as international gatherings like in Madrid fracture due to parochial disagreements, leaders from China and California now have an opportunity to fill the void and marshal other like-minded jurisdictions to join their climate and energy initiatives. Now is the time to move beyond international coalitions and toward coalitions of the willing – and the doing.