Opportunities for California to Learn from the European Union: Perspectives from a Graduate Student Researcher

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With its 2045 carbon neutrality goal, cap-and-trade system, and broad portfolio of policy measures, California is often cited as an example of subnational climate leadership and action. This was reinforced over the past semester as I worked with fellow Berkeley Law graduate student researcher David White, on a California-China Climate Institute Training Guide that offers an in-depth overview of California's climate policies and goals, sector-by-sector. However, in conducting this research, it also became clear that there still remain policy gaps which must be addressed to reduce greenhouse gas (GHG) emissions even further, and ensure California's ambitious climate goals are met. In fact, there's much that can be learned from other jurisdictions, like the European Union.

Coming from France, a region where public transit systems are widely-utilized and form a core facet of climate policy action, it struck me that this is not similarly prioritized in California climate policy. For example, in the policies I reviewed, there were relatively few mentions of public transportation policies; yet these would need to be further developed to be effective policy tools. For example, the 2022 Scoping Plan draft mentions the need "to [i]nvest in making public transit a viable alternative to driving by increasing affordability, reliability, coverage, service frequency, and consumer experience"[1] without clearly offering guidelines as to how to achieve this goal.

California can start by focusing on its major existing public transit systems. Both the BART and the LA metro systems should be extended, made safer, more affordable, and run more frequently. Put simply: the pace of construction and expansion is too slow in California. To connect the major cities by rail is also an absolute necessity to reduce emissions and freeway traffic and California should ensure it completes its high speed rail system with trains running between San Francisco and Los Angeles (LA) (as exists between many European cities). Moreover, public transit systems should run on green fuels or be fully electric. European cities such as Oslo, Norway provide a strong example; by 2028, all public buses, boats, and all new taxis there will be fossil-free and the public transportation in Oslo will be carbon neutral.[2]

It's critical the state also focuses on emissions that stem from goods movement. For example, policies should be drafted to help Long Beach Port hinder its GHG emissions; it is currently aiming for zero-emissions goods movement, with a goal of transitioning terminal equipment to

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[1] AB 32 EJ Advisory Committee, 'Draft Recommendations', F1D. < https://ww2.arb.ca.gov/sites/default/files/barcu/board/books/2022/031022/ejacrecsrevised.pdf> (ca.gov) accessed May 16, 2022

[2] *See* Peters A, 'This Is What a Zero-Emissions City Looks Like' (Fast CompanySeptember 21, 2020) <https://www.fastcompany.com/90552168/this-is-what-a-zero-emissions-city-looks-like#:~:text=%5BPhoto%3A%20Ingar%20S%C3%B8rensen%5D%20Oslo,transportation%20will%20be%20zero%2Demissions> accessed May 16, 2022

zero emissions by 2030 and on-road trucks by 2035.[3] Yet, Long Beach should also strive to decarbonize the actual fleets, perhaps offering cut-backs on the cost of docking a vessel or some free berthing time if the vessel runs on 50% or more renewable fuels. Setting up more green corridors and shipping lanes should also be pursued, as vessels account for the equivalent to the annual emissions from over 205 million cars.[4]

Another domain where California could potentially learn from its European counterparts is in the buildings sector. For example, the European Union requires that, as of 2021, all new buildings must be nearly zero-energy buildings (NZEB) and from 2019, all new public buildings should be NZEB under the new revised version of the Energy Efficiency Directive. This revised Directive also requires that the worst-performing residential houses or flats are renovated to achieve energy-efficiency standard F by 2030, and then to E by 2033,[5] while non-residential buildings are expected to hit the F grade by 2027 and E by 2030.[6] These are building energy-efficiency standards used in Europe to assess and rate a building's energy efficiency, with A being the highest. California should implement similar measures pushing green building standards further. While the state recently drafted its first green building code, known as CalGreen, these standards only apply to newly-constructed and substantially-renovated buildings, which should be changed in accordance with the EU legislation.[7]

California should also consider further developing offshore wind energy, especially policies and regulations surrounding this new source of energy. The European Union has preferred to develop offshore wind energy (while also drafting legislation and targets for solar, hydrogen, and other renewable fuels) yet California seems to be taking things slower.[8] In November 2020, the European Commission set up a new European Union Strategy on Offshore Renewable Energy which proposes to increase Europe's offshore wind capacity from its current level of 12 Gigawatts (GW) to at least 60 GW by 2030 and to 300 GW by 2050.[9] The Commission also

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[3] Port of Long Beach, 'OUR ZERO EMISSIONS FUTURE' (*Polb.com* 2018) <https://polb.com/environment/our-zero-emissions-future/> accessed May 16, 2022

[4] The International Maritime Organization (IMO) calculated that ocean-going vessels released 1.12 billion metric tons of carbon dioxide in 2007. *See* Oceana, 'Shipping Pollution' (Oceana - Protecting the World's Oceans, 01/10/2007) <https://europe.oceana.org/en/shipping-pollution-1#:~:text=The%20International%20Maritime%20Organization%20(IMO,in%202006%20(135%20million).> accessed 17 May 2022

[5] Standards are categorized from A to F, A being the most stringent/best and F being of very poor efficiency.

[6] European commission, 'Energy performance of buildings directive' (*Energy Efficiency for Buildings*, 2018) <https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficient-buildings/energy-performance-buildings-directive_en> accessed 17 May 2022

[7] European council for an energy efficient economy, 'The Energy Efficiency directive' (*European Council for an energy efficient economy*, 2021) <https://www.eceee.org/policy-areas/EE-directive/> accessed 17 May 2022

[8] In July 2021, the Commission proposed an amendment to the Renewable Energy Directive to align its renewable energy targets with its new climate ambition. The Commission proposes increasing the binding target of renewable sources in the EU's energy mix to 40% by 2030 and promotes the uptake of renewable fuels, such as hydrogen in industry and transport, with additional targets. European parliament, 'Renewable Energy' (*Fact Sheets on the European Union*, 2021) <https://www.europarl.europa.eu/factsheets/en/sheet/70/renewable-energy> accessed 17 May 2022

In California, here is the government's plan: California energy commission, 'Offshore Wind in California' (*Offshore Renewable Energy*, 2018) <https://www.energy.ca.gov/programs-and-topics/topics/renewable-energy/offshore-renewable-energy> accessed 17 May 2022

[9] Eur-lex , 'COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS' (*Access to the*

wants to see the current offshore 3% contribution to the electricity market go up to 15% in 2030 and 30% by 2050.[10] Developing offshore wind is something that California has not pursued as readily, yet seems to provide reliable, cheap, and sustainable energy. Moreover, Europe's strong regulatory laws ensure that lobbying is kept at a minimum – meaning the consumer has better and cheaper access to renewable energy.

The EU is undergoing a significant amount of climate policy redrafting regarding aviation and maritime fuels – which are not as clearly tackled in California's climate policies. For instance, in July 2021, the Commission adopted a package of proposals entitled "Delivering the European Green Deal."[11] This Deal, similar to the California Scoping Plan, aims to reduce emissions by at least 55% by 2030 (compared to 1990 levels) and make the EU carbon-neutral by 2050 – which is similar to California's GHG reduction goals. What is truly ambitious and interesting are the new proposals drafted under this Green Deal, such as the regulation on the deployment of alternative fuels infrastructure,[12] the ReFuelEU Aviation Initiative,[13] and the FuelEU Maritime Initiative.[14]

California is a leader in the global fight to curb GHG emissions, yet there are a number of policy gaps it still needs to fill, and there is much to learn from other jurisdictions, including the European Union. With respect to public transportation, rail and shipping decarbonization, offshore wind development, regulating lobbyists' powers, and building and home energy efficiency standards there is enormous opportunity to do even more.

European Union Law, 19/11/2020) <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2020:741:FIN> accessed 17 May 2022

[10] Euronews.green, 'Europe's offshore wind industry is taking off' (*Climate Now*, 02/06/2021) <https://www.euronews.com/green/2021/05/31/europe-s-offshore-wind-industry-is-taking-off> accessed 17 May 2022

[11] European commission, 'Delivering the European Green Deal' (*Delivering the European Green Deal*, 2020) <https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/delivering-european-green-deal_en > accessed 17 May 2022

[12] Eur-lex , 'Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the deployment of alternative fuels infrastructure, and repealing Directive 2014/94/EU of the European Parliament and of the Council' (*Access to European Union Law*, 14/07/2021) <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A52021PC0559> accessed 17 May 2022

[13] Eur-lex , 'Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on ensuring a level playing field for sustainable air transport' (*Access to European Union Law*, 14/07/2021) <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0561> accessed 17 May 2022

[14] European commission, 'Explanatory memorandum' (*Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the use of renewable and low-carbon fuels in maritime transport and amending Directive 2009/16/EC*, 14.7.2021) <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52021PC0562&qid=1633680683160&from=EN> accessed 17 May 2022