# California prioritises climate change spending and prepares to enter 'Lithium Valley' Market Report

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### **Summary**

- Climate is at the forefront of California Governor Gavin Newsom's budget priorities and the state's future economic
  development plans. A hefty US\$37.5 billion is proposed for climate related programmes with spending to take place
  over the next six years.
- Of that, US\$10 billion is earmarked for investment in zero emission vehicles, including to help develop the consumer market, build out infrastructure and improve options in low-income communities.
- The state budget also allocates funding to support workforce adaptation to climate related industries, investment incentives for clean tech, and to support the growth of sustainable lithium mining developments in Southern California.

### Report/findings

- California Governor Gavin Newsom recently unveiled his state budget proposal for the 2022-23 financial year. The US\$286.4 billion spending proposal is almost 10 percent larger than last year's record high budget. It projects another sizable surplus of more than US\$21 billion off the back of California's strong economic performance, particularly from its high value sectors that have continued to thrive throughout the pandemic. While the budget proposal is an initial indication of spending priorities and is subject to amendments by legislators before being finalised in June it is unlikely that major changes to the headline priorities will be made.
- Climate related spending features prominently in the proposal, particularly in relation to the state's economic
  recovery and future economic plans. Governor Newsom has proposed spending US\$22.5 billion on climate related
  programmes, which coupled with US\$15 billion from last year's budget, allocates a total of US\$37.5 billion to be
  spent over the next six years.
- A significant portion of the budget will be spent addressing the impacts that climate change is already having in the
  state. Over US\$12 billion is to be spent on wildfire response and preparedness, water resiliency, drought response,
  mitigating the risks of extreme heat and building coastal and community resilience. However, funding is also being
  applied across a wide range of state government agencies for investments aimed at reducing emissions and
  meeting California's climate targets.
- Housing, for example, is an area seeing investment through a climate and equity lens. In addition to supporting
  new affordable builds, the state is also investing heavily in decarbonisation projects that look to phase out natural
  gas from existing California households. Gas furnaces, water heaters and stoves account for about 10% of the
  state's climate pollution. The Governor's budget proposal aims to bring that down by investing nearly US\$1 billion
  in retrofitting buildings with energy-efficient lighting, better insulation and electric appliances such as heat pumps
  and induction cooktops. Nearly two-thirds of the funding would be set aside for low-income communities and
  US\$300 million for consumer rebates to replace gas equipment.

#### Zero emission vehicles

- A key climate priority is the transition to zero emission vehicles (ZEVs). This is a priority pillar of the state's
  emission reduction goals and the new budget proposal follows on from last year's record investments in ZEVs and
  associated infrastructure. It proposes spending an additional US\$6.1 billion, which combined with last year, will
  take the total investment to US\$10 billion to be committed over the next six years.
- This allocation includes over US\$1.5 billion on investments focused on improving the access and affordability of
  zero emission transportation options and infrastructure to low-income communities. Spending of US\$3.5 billion is
  proposed for heavy-duty trucks, buses, port transportation and charging infrastructure. This includes enough
  funding to convert at least one third of the state's public school bus fleet to electric.

#### **Lithium Valley**

- The state has ambitions to not only lead the US consumer market for ZEVs, but also to be a global player in the value chain for ZEV manufacturing. California has one of the world's largest, currently untapped, lithium deposits a key mineral for battery technology. Experts believe the opportunity in Southern California, dubbed "Lithium Valley", could satisfy up to one third of today's global lithium demand. Pilot programmes are currently being established that extract lithium from the brine in the geothermal power generation process. The companies project that once at scale, they could sustainably produce 90,000 metric tons of lithium per year.
- The Biden Administration has also emphasised the importance of the lithium opportunity in California. President
  Biden recently spoke at a virtual event with Governor Newsom on the opportunities present in California to secure
  critical minerals. The President stated that it was a key part of his Administration's economic plan to secure
  domestic supply and reduce reliance on foreign exporters.
- While the budget proposal does not allocate specific funding for Lithium Valley, there are new tax credits being
  offered for green technology investments that could apply to lithium extraction. Both federal and state
  governments have funded grants to establish Lithium Valley pilot projects, and the California Governor has
  announced that to facilitate further investments in Lithium Valley regulatory burdens would be eased to help
  establish facilities in the region.

#### Diversified clean energy

- To support the state-wide transition to renewable energy, the budget proposal includes approximately US\$2 billion for investments in a diversified range of clean energy technologies. US\$620 million has been allocated for long-duration energy storage projects, including bringing back on board a 925 megawatt pumped hydro project. These investments aim to improve grid resilience by providing backup power to the state's large solar and wind farms.
- Another notable energy investment is US\$100 million towards the production and use of green hydrogen. Los
  Angeles is positioned to seize low-carbon hydrogen opportunities with the City's publicly owned utility committing
  to run a number of its fossil-fuelled power plants (4,300 megawatts) partly on green hydrogen by around middecade, with a goal to run on 100 percent hydrogen in about 10 years. Its hope is that the commitments will
  create enough demand and a market for green hydrogen to bring scale and drive down green hydrogen production
  costs.

#### **Supporting the workforce and investment**

• The California budget proposal also aims to reaffirm the state as a leader in green technology innovation and investment. It proposes a number of new incentive programmes aimed at making the state a cost-competitive location for businesses, while also investing in a number of workforce development programmes. Again, these incentive programmes are focused on climate related industries and are being developed through an equity-

focused lens

- The first programme is the innovation headquarters tax credit. This allocates US\$250 million per year in tax credits for businesses that are headquartered in California and are investing in activities and technologies that mitigate climate change. Secondly, there will be a tax credit available for companies that work in the development of green energy technology, which will total US\$100 million per year for three years. This credit will fund pre-development costs for new technologies such as: electric vehicle manufacturing and infrastructure; geothermal lithium extraction and battery manufacturing; long-duration storage; addressing methane emissions; and hydrogen technologies to reduce the use of natural gas. This credit will also be structured so that if the business becomes profitable, a share of profits will be repaid to the state.
- The budget proposal also allocates approximately US\$550 million over three years to expand the state's climate workforce strategies. This will provide grant funding for programmes such as regional incubators and training hubs to prepare and train the workforce for new climate related jobs. Emphasis has also been placed on opportunities to train and transition California's displaced oil and gas workers into new climate clean-up projects including the capping/plugging of unused oil and gas wells.

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