



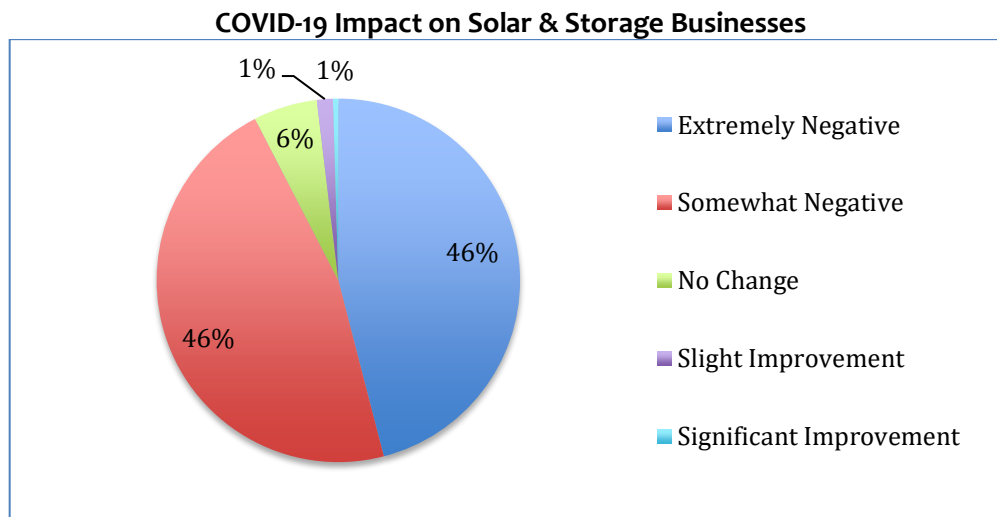
Initial Impacts of COVID-19 on the California Solar and Storage Industry

April 2020 Survey Summary

An Industry Hit Hard by COVID-19

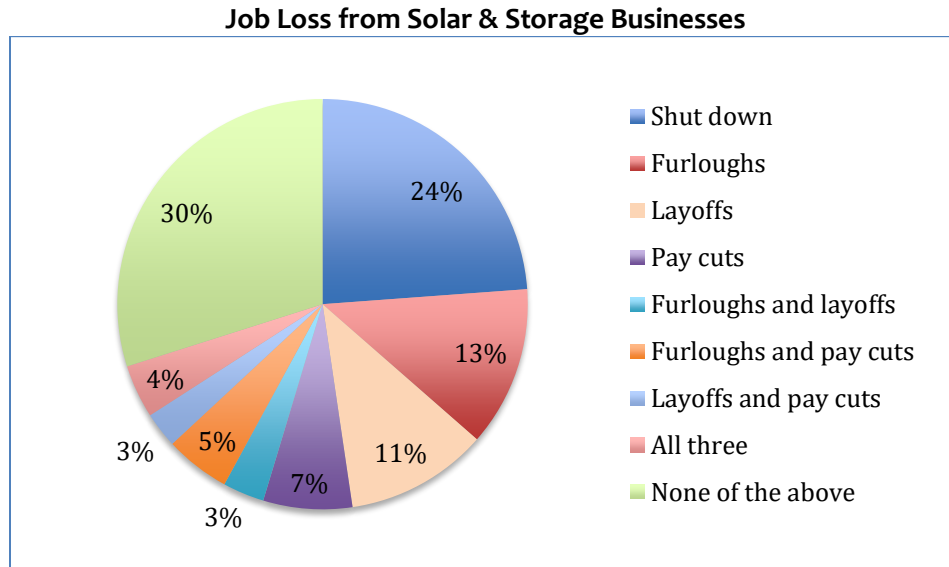
The California Solar & Storage Association surveyed its members on the impacts of COVID-19. Responses were received from 212 companies April 16-21, 2020, approximately one month after the statewide shelter in place order was declared on March 19, 2020 and orders from Bay Area Counties were declared on March 16, 2020. Responding companies included residential installers, commercial project developers, engineering firms, financiers, and manufacturers within the distributed solar photovoltaic, solar heating and cooling, and energy storage markets.

The survey found that COVID-19 has negatively impacted 92% of solar and storage companies. Half of those companies reported the impact to be extremely negative and the other half characterized it as somewhat negative.

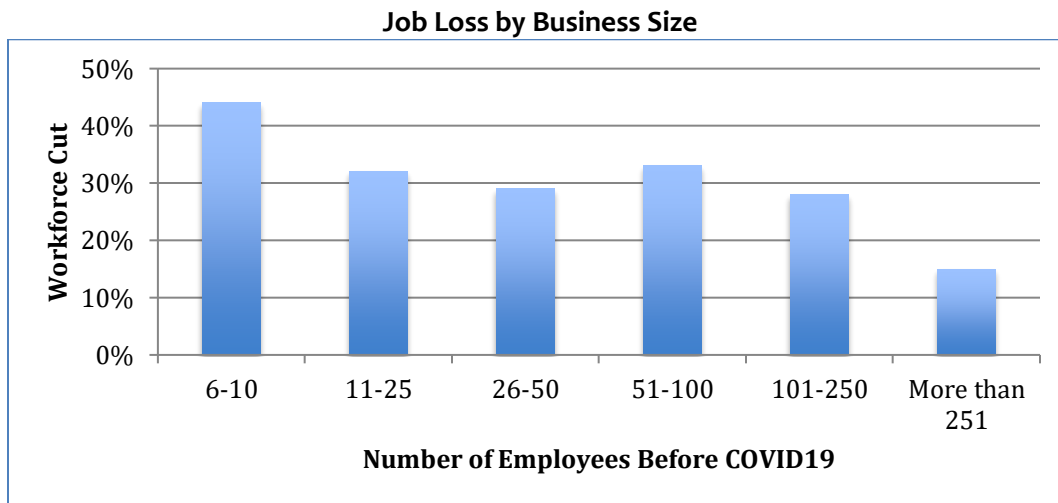


24% of the respondents reported that they had laid off or furloughed their entire workforce. Another 46% had implemented layoffs, furloughs and/or pay cuts for some portion of their employees. Only 30% of businesses reported being able to continue to employ their entire workforce at full pay.

In all, businesses responding to the survey laid off or furloughed 21% of their employees. Scaling the survey results to statewide employment data indicates that 15,600 solar and storage jobs have been lost.

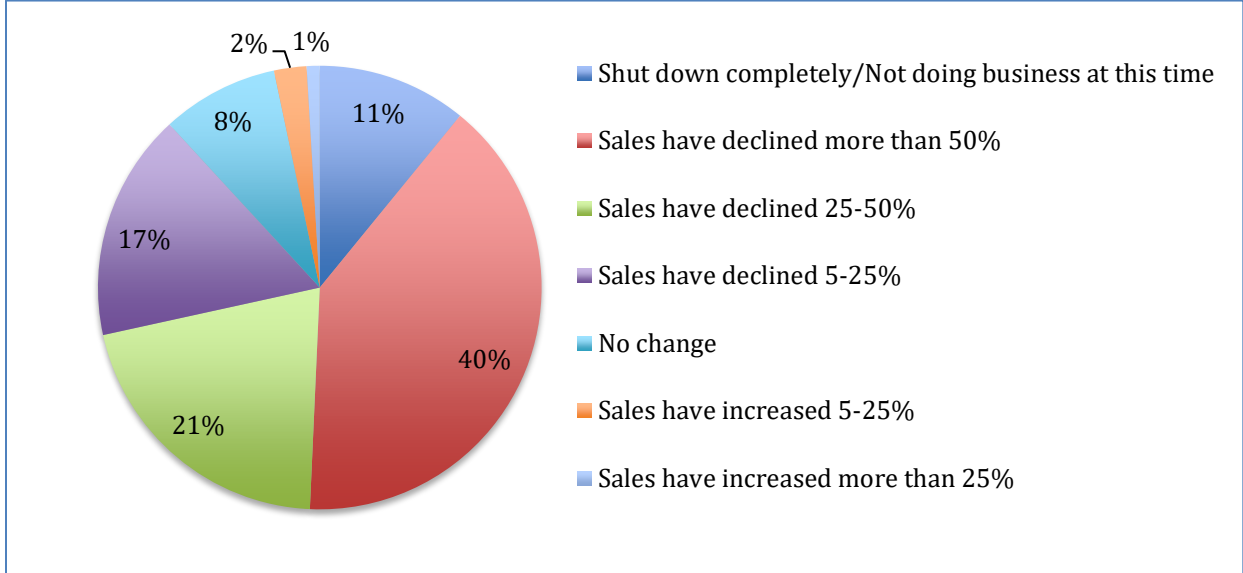


Job loss appears to be hitting smaller businesses harder. Businesses that had 6-10 employees have laid off 44% of their employees, while businesses that had more than 150 employees have let go 15% of their employees. These results do not mean that large businesses have not suffered under COVID-19 but rather that small businesses might be particularly susceptible to sudden changes in the marketplace.



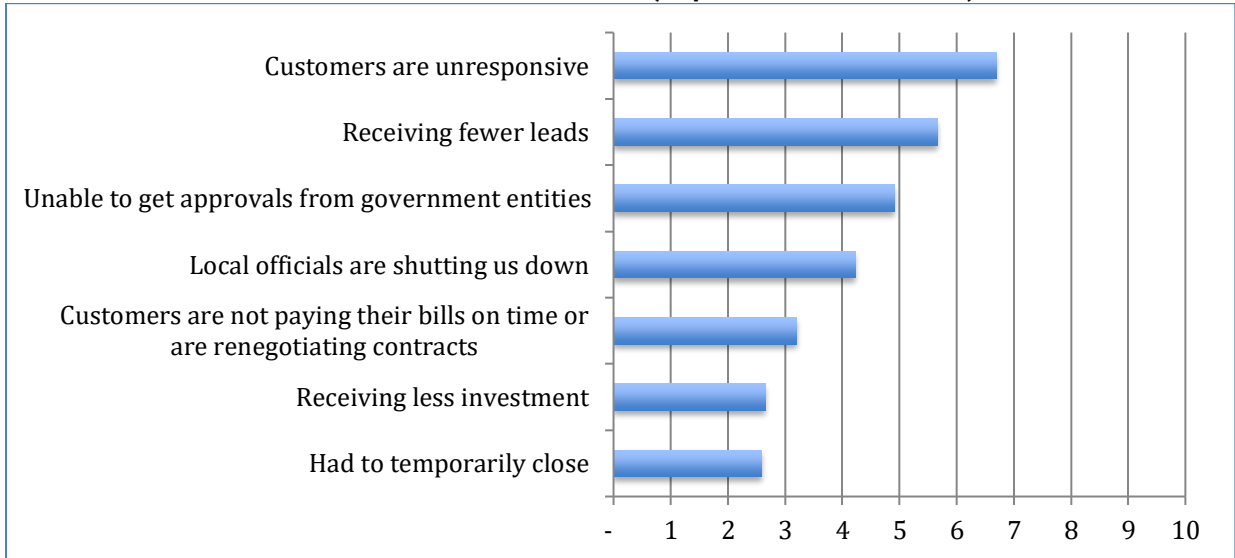
Sales activity has declined. Most companies are meeting with customers via teleconference, but the volume of those interactions is far below previous customer meetings. 89% of businesses reported reductions in sales. 51% were experiencing less than half of pre-COVID-19 sales activity or were shut down completely.

Sales Activity for Solar & Storage Businesses



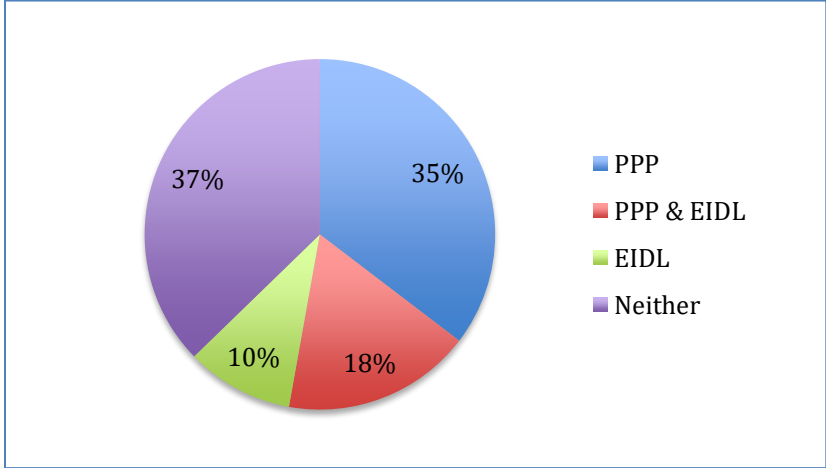
The reasons for a reduction in sales hinge mostly on customers not wanting to engage during the health crisis and government entities and utilities not allowing the activity. CALSSA expects the customer disengagement to rebound. Facilitating online permitting and inspections will be increasingly important.

Reasons for Reduction in Sales (Importance on 1-10 Scale)



Sixty-three percent of businesses reported that they had applied for financial assistance from the Paycheck Protection Program and/or the Economic Injury Disaster Loan program from the U.S. Small Business Administration. Only eight businesses reported that financial aid had been received. Many businesses did not get accepted because they did not apply quickly enough, or their bank was ultimately unable to process applications.

Applications for Financial Assistance

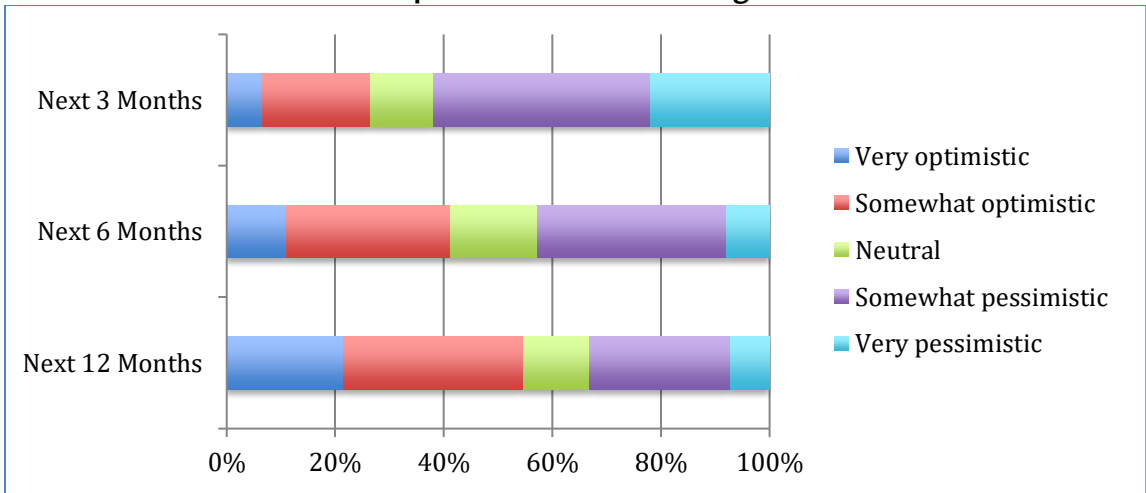


An Industry Ready to Rebound

Despite this disastrous impact, solar and storage companies are poised to rebound if recovery happens quickly.

Solar industry optimism is negative in the short term, but survey respondents were optimistic that the market could grow if barriers do not persist.

Level of Optimism for Solar & Storage Growth



There is a significant volume of project activity that has been designed and contracted. Twenty-eight companies reported pipelines of more than 50 projects each. Forty-seven companies reported pipelines exceeding 1 megawatt of clean, renewable energy. These projects could be built quickly for strong near-term activity if barriers are lifted. Maintaining a pipeline will be more difficult if customer activity does not quickly return to normal.

Solar & Storage Projects Designed and Contracted

# Projects in Pipeline	# of Companies	Capacity in Pipeline	# of Companies
1-25 projects	126	10-100 kW	55
26-50 projects	18	101-400 kW	38
50+ projects	28	500+ kW	21
		1 MW+	47

In addition to the ready-to-rebound stance of most companies within this industry, distributed solar and energy storage projects are some of the most “shovel ready” of all infrastructure investments. Pre-COVID-19, California averaged 400 residential solar installations per day. From the point of initial customer contact to interconnection, most residential projects can be completed within a matter of weeks. In addition, pre-COVID-19, California was averaging more than two hundred large, commercial projects per month. While these larger projects, such as school and farm installations, are more complex and require advanced design and engineering, even these projects can be shovel ready within months. California’s public schools could see the installation of solar and energy storage on at least 2,000 K-12 school sites in the next few years.

If workforce is not regained quickly, pipelines will fade. The longer it takes to resume full business activity, the harder it will be to reach pre-COVID-19 levels. It is difficult to hire people if there is not an existing pipeline of projects, and it is hard to develop a pipeline of projects without employees.

Many workers’ current unemployment is termed “furlough” but does not have a firm date to return to work. Employers in these cases have good intentions to hire back their trained workers, but without firm plans for an end to the unemployment workers will commit to other jobs.

California Should Use Solar & Storage Opportunities for Economic Stimulus

Customer-sited solar energy and energy storage can be built quickly and produce economic activity in local communities throughout the state. Trained workers need to be brought back to work before circumstances require them to commit to other employment. If businesses can quickly regain a steady stream of projects, they will be poised to grow and produce even more economic activity.

- California should set a goal of building a million solar-charged batteries. Similar to when California set a goal of building a million solar roofs, significant economic activity, job growth and consumer engagement would follow from the state’s direct engagement and the resulting policies designed to achieve the goal.
- California should ensure local building departments have the resources they need to adopt online permitting portals and no-touch inspection practices. Many local governments have made great strides in online permitting to protect public health during the COVID-19 crisis. They can solidify this approach and expand on it by adopting the National Renewable Energy Lab’s SolarAPP, an advanced system that creates government efficiency in permitting.
- California should undertake a massive investment in clean energy infrastructure to boost the economy while making advancements to decarbonize our energy system and provide

greater community-level resiliency. This could be funded through a combination of bond financing, tax credits, and program outlays.

- Congress should provide direct payments of tax credits for the next 18 months and extend the safe harbor provisions and commence construction deadlines at credit levels currently in place for clean energy projects. These measures will keep projects moving and ensure companies do not lose a productive year as credits decline.
- California should protect solar and storage investments from unnecessary taxes at the local level.

For more information regarding this survey or the state of the solar and storage industry in California, please contact us at www.calssa.org or info@calssa.org.
