

SMAC

SMAC Legislative Report

Of CALIFORNIA

News from the Small Manufacturers Association of California

A compilation of news and commentary on the recent actions of California legislators and bureaucrats in Sacramento

SPACEX AWARDED \$82.7 MILLION U.S. AIR FORCE CONTRACT TO LAUNCH SATELLITE INTO ORBIT

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Lt. Gen. Samuel Greaves, Air Force Program Ex. O. for Space

“This (minimum wage increase) is about economic justice, it's about people. This is an important day, it's not the end of the struggle but it's a very important step forward.”

Governor Gerry Brown

By Tom Martin
SMAC Executive Director
& Legislative Chairman

TechCrunch writer Emily Calandrelli reports the U.S. Air Force has awarded SpaceX an \$82.7 million contract to launch their GPS-3 satellite into orbit. This is the first National Security Space (NSS) contract for SpaceX, who won essentially by default since United Launch Alliance (ULA), the only other viable competitor, declined to bid in the competition.

“This GPS III Launch Services contract award achieves a balance between mission success, meeting operational needs, lowering launch costs, and reintroducing competition for National Security Space missions,” according to Lt. Gen. Samuel Greaves, Air Force Program Executive Officer for Space

SpaceX winning the first competitively sourced NSS contract is evidence that the rules of the military launch market have officially changed. For more than a decade, ULA enjoyed a monopoly over these Air Force military contracts. (Centennial, CO. based ULA is a joint venture of Lockheed Martin Space Systems and Boeing Defense, Space & Security.) Over the past two years, however, much has happened between SpaceX, the Air Force and ULA that changed that situation.

In April of 2014, SpaceX filed suit against the Air Force in an effort to break ULA's monopoly and gain the ability to compete for national-security-related launches.

Elon Musk, CEO of SpaceX, argued that ULA's monopoly of Air Force launches was unjustified. Musk stated, “This contract is costing U.S. taxpayers billions of dollars for no reason, and to add salt to the wound, the primary engine that's used is a Russian engine.”

In January of 2015, the Air Force agreed to work with SpaceX to certify their rocket for military satellite launches and SpaceX dropped their lawsuit. Musk's rocket company ultimately received certification from the Air Force later that year.

Today, ULA and SpaceX are the only two companies certified to compete for military launch contracts. So why didn't ULA bid for this one? SpaceX's competitive prices and the fact that ULA's rocket requires a Russian-made RD-180 engine are two of the main factors that led to that decision.

ULA's use of a Russian engine to launch national security assets has been the source of contentious debate for a while. Congress has even gone so far as to place a purchasing ban on RD-180s altogether.

Some saw this ban as unfairly singling out ULA since NASA has been paying hundreds of millions of dollars to the Russians to send U.S. astronauts to the International Space Station for years now.

With the purchasing ban in effect at the time (it has since been temporarily lifted), ULA declined to bid for the GPS-3 contract, stating that they couldn't guarantee that they would have a rocket available come May, 2018.

TechCrunch writer Calandrelli reports that recently, ULA's engineering vice president, Brett Tobey, spoke all too frankly on the situation between ULA, their RD-180 engine and the competition with SpaceX. Among other controversial things, Tobey suggested that ULA didn't bid for the GPS-3 contract because they couldn't compete with SpaceX's prices.

“Along came Elon Musk and changed the game completely... we can't afford [to bid] anymore because the price points are coming down as low as \$60 million. The best day you'll see us bid at \$125 million or twice that number,” Brett Tobey said.

Tobey was later forced to resign from ULA.

But price isn't all that matters Calandrelli reported. The fact is ULA has a longer and better track record of launches than SpaceX and, in terms of launching national security assets, that's an incredibly important trait.

Unfortunately for ULA, their RD-180 engine will continue to be an issue until they find a reliable engine to

replace it. In an effort to do just that, ULA partnered with Blue Origin and Aerojet Rocketdyne to pursue two options for an American-made engine. However, it may take until 2019 to have a launch-ready engine to replace the RD-180.

The satellite for this week's GPS-3 contract will launch on a Falcon 9 rocket from Cape Canaveral in May, 2018. This is the first of nine competitive launch services from the Air Force, so there are many more opportunities for SpaceX and ULA to go head-to-head and compete for these contracts.

EMPLOYERS PLAY WAITING GAME WHILE FACING MAJOR PAYROLL CHALLENGES

A popular idiom says people spend time "waiting for the other shoe to drop." According to legend waiting was "A common experience of tenement living and other similar style housing in New York City during the manufacturing boom of the late 19th and early 20th century. Apartments were built similar in design with one's bedroom under another's. Thus, it was normal to hear a neighbor removing shoes and hearing them hit the floor above. As one shoe made a sound hitting the floor, the expectation for the other shoe to make a similar sound was created." California employers – especially small manufacturers – can certainly be identified with those waiting for the government to act.

THE FIRST SHOE HAS DROPPED

Governor Edmund G. Brown Jr. joined supporters from across the state when he signed landmark legislation that makes California the first state in the nation to commit to raising the minimum wage to \$15 per hour statewide. New York quickly followed our lead.

"This is about economic justice, it's about people," said Governor Brown. "This is an important day, it's not the end of the struggle but it's a very important step forward."

Under the legislation - SB 3 by Senator Mark Leno (D-San Francisco) - minimum wage will rise to \$10.50 per hour on January 1, 2017 for businesses with 26 or more employees, and then rise each year until reaching \$15 per hour in 2022. The bill also recognizes the contributions of small businesses - those with 25 or fewer employees - to California's economy by allowing additional time for these employers to phase in the increases.

The legislation increases the minimum wage over time, consistent with economic expansion, while providing safety valves - known as "off-ramps" - to pause wage hikes if negative economic or budgetary conditions emerge. The governor can act by September 1 of each year to pause the next year's wage increase for one year if there is a forecasted budget deficit (of more than one

percent of annual revenue) or poor economic conditions (negative job growth and retail sales).

Once the minimum wage reaches \$15 per hour for all businesses, wages could then be increased each year up to 3.5 percent (rounded to the nearest 10 cents) for inflation as measured by the national Consumer Price Index.

MINIMUM WAGE ANNUAL IMPACT		
Employees	<u>26 or More</u>	<u>25 or Less</u>
\$10.00/hour	Jan. 1, 2016	Jan. 1, 2016
\$10.50/hour	Jan. 1, 2017	Jan. 1, 2018
\$11/hour	Jan. 1, 2018	Jan. 1, 2019
\$12/hour	Jan. 1, 2019	Jan. 1, 2020
\$13/hour	Jan. 1, 2020	Jan. 1, 2021
\$14/hour	Jan. 1, 2021	Jan. 1, 2022
\$15/hour	Jan. 1, 2022	Jan. 1, 2023

Between 2018 and 2023 the governor can choose to delay (off-ramp) any scheduled increase for one year if either adverse economy or budget conditions are met. The increase to \$10.50/hour is not subject to off-ramps. The governor must make the final determination by September 1, each year.

- **Economy:** The governor has the ability to delay an increase if seasonally adjusted statewide job growth for either the prior 3 or 6 months is negative and retail sales receipts for the prior 12 months is negative.
- **Budget:** The governor has the ability to delay an increase if any year from the current budget year to two additional years is forecasted to be in deficit when including the next scheduled increase. Pursuant to Proposition 2, a multiyear forecast is adopted as part of the annual Budget Act. A deficit is if the operating reserve is projected to be negative by more than 1 percent of annual revenues, currently about \$1.2 billion. The budget off-ramp can only be used twice.

Wage increases will be indexed annually for inflation (national CPI) beginning the first January 1 after small business are at \$15/hour. A floor of 0 percent (no decreases) and a ceiling of 3.5 percent Off-ramps will not apply once the state gets to \$15/hour.

The governor noted there are approximately 7 million hourly workers in California and almost 2.2 million workers are currently paid minimum wage.

WAITING FOR THE OTHER SHOE

Atlanta based Fisher & Phillips LLP Attorney John E. Thompson, reported April 19 that the publication date for the U.S. Labor Department's revised federal Fair Labor Standards Act's Section 13(a)(1) "white collar"

exemption definitions remains uncertain. But a growing consensus is that they are likely to be released within the next four weeks or so.

(Under current federal law employee's classified as exempt from overtime pay under the Fair Labor Standards act must be paid a minimum of \$23,660.00, (\$1,971.66 monthly, \$455.00 weekly.) The administration's proposed change in overtime would more than double that threshold for white-collar-workers, to \$50,440.00 (\$4,203.33 monthly, \$970.00 week) from the current amount of \$23,660.00.

Attorney Thompson reports, "We still anticipate that the revisions' effective date will be 60 days after publication. This suggests that management should be in a position to implement its compliance plans if need be by mid-to-late July, or perhaps early August."

The Fisher & Phillips partner said, "We have previously reported the introduction of bills in the U.S. House and Senate that are intended to block the changes. Now, Bloomberg BNA says that House Republicans are conferring in earnest about invoking the Congressional Review Act in an effort to prevent the final regulations from taking effect.

Thompson said "Our sense is that neither of these initiatives is likely to be successful. Even if Congress votes in favor of one or both of them, an override-proof presidential veto seems virtually certain. At most, a CRA resolution might delay the new rules' effective date for a limited period.

USDOL's July 2015 proposals simply indicated in its accompanying commentary that it was thinking about whether to permit unspecified "nondiscretionary bonuses and incentive payments" to be creditable in some unidentified way toward whatever the salary threshold turns out to be. Thus, employers should not simply assume that any such mechanism will appear in the final regulations.

Furthermore, USDOL expressed its view that such a credit or offset:

- ◆.Should be capped at 10% of the salary threshold;
- ◆.Should be limited to sums paid monthly or more frequently; and
- ◆.Should not include "commissions" (a term that USDOL did not define).

Consequently, whether or in what form any such credit or offset will appear in the final regulations remains undetermined.

Attorney Thompson states employers should not count on Congress to prevent USDOL's changes from taking effect. At best, the question is most likely not one of whether, but instead when.

"Understandably, management might choose to explore the potential mitigating effects of somehow being able to count "nondiscretionary bonuses and incentive payments" toward a higher salary amount,"

Thompson concludes. "However, employers would be wise to finalize their overall compliance plans *first* and should do so without relying upon this possibility."

Employers are urged to monitor this USDOL proposal and confer with their labor lawyer about its impact on their businesses.

KNOW THE LAW

EMPLOYMENT ELIGIBILITY I-9 FORM HAS EXPIRED BUT CONTINUES TO BE USED

California Employers Association (CEA) has reported that the current version of the Form I-9, one of the most fundamental tools employers use in the hiring process, expired on March 31, 2016, but continues to be used.

Employers are responsible for completing and retaining Form I-9. "Employer" means all employers, including those recruiters and referrers for a fee who are agricultural associations, agricultural employers, or farm labor contractors. Employers must complete Form I-9 to document verification of the identity and employment authorization of each new employee (both citizen and noncitizen) hired after November 6, 1986, to work in the United States. The Form I-9 is used to determine if applicants are eligible to work in the U.S. and is completed after a job offer is made, but before an individual starts to work. Employers are responsible for completing and retaining Form I-9.

Sacramento headquartered CEA is a not-for-profit Human Resource employers association with offices statewide that serves over 9000 California businesses.

CEA ponders "So where does this expired form leave those responsible for the hiring process? And then answers "Until further notice, employers should keep using the expired form until a recently proposed "smart" I-9 goes into effect, according to U.S. Citizenship and Immigration Services (USCIS)."

Dave Basham, a senior analyst in the verification division at USCIS, says: "Employers should continue to use the current version of the form as it continues to be effective even after the OMB [Office of Management and Budget] control number expiration date March 31, 2016, has passed."

Eventually, a newer and supposedly improved version of the I-9 will be made available to all employers.

CEA can be reached at www.employers.org or by phone at 800-399-5331.

LASER WELDING WORKS BETTER TO ASSEMBLE SMALLER, INTRICATE PARTS

John Sprovieri Assembly Magazine editor in chief reports As plastic medical devices get smaller and more intricate, engineers have fewer options for assembling them.

Friction-based joining processes, such as ultrasonic welding, spin welding and vibration welding, work fine for most assemblies, but they can also generate particulates, and that's a no-no for some medical devices. For example, the fluid channels inside a blood test cassette might be a millimeter wide. Even small particulates could impair the cassette's performance.

Assembly Magazine's Sprovieri reports laser welding solves that problem. "The overriding reason medical device manufacturers choose laser welding is that it's a clean joining method," says Hugh McNair, manager of laser applications and systems at Branson Ultrasonics Corp. "It does not generate particulates."

Branson is one of several suppliers of laser plastic welding technology, including Dukane Corp., LPKF Laser & Electronics, and Leister Technologies LLC.

Branson's process—simultaneous through-transmission infrared laser welding—is unique. Multiple diodes produce laser light at a wavelength of 990 nanometers. Fiber-optic bundles transmit the light through a waveguide that uniformly distributes energy to the entire joint line simultaneously. (In other technologies, the laser traces or scans the joint line.)

The light passes through the top part and is absorbed by the bottom part. The absorptive part converts the energy to heat, which conducts across the interface to melt both parts and produce a weld. The two halves of the part are clamped together throughout the process.

The waveguide is custom-made for each part, but quick-change tooling can be built to assemble families of parts. "We have customers who change tools daily," McNair points out.

Illuminating the entire bond line simultaneously reduces overall cycle time, enabling the technology to be considered for high-volume assembly of disposable medical devices. Depending on the application, cycle times range from 0.5 to 5 seconds. "We've done applications in as little as 6 to 8 milliseconds per part," says McNair.

The process can weld a variety of elastomers and thermoplastics, including polypropylene, polyether ether ketone, and high-density polyethylene. "The latter welds very well with a laser, but can be difficult to weld with ultrasonics," adds McNair.

The top part can be any color, as long as it's transmissive to near-infrared light. Similarly, the bottom part can be any color, as long as it absorbs light. Plastics containing significant levels of glass filler can be problematic, since the fibers can scatter or refract the light.

The process can weld small parts and large parts, flat parts and contoured parts, thin parts and thick ones, and similar and dissimilar materials. "We can weld parts that are only millimeters across, like cannulas, and we can weld large parts, like automotive taillights," says McNair. "We can also weld membranes and films."

The process is "quite expensive," concedes McNair, but for some applications, there are no other alternatives. For example, because it does not depend on mechanical energy to generate heat, laser welding is ideal for welding assemblies that contain sensitive electronics.

NORTHROP, USC TO RESEARCH OPTICAL MATERIALS, NANOPHOTONIC DEVICES

Northrop Grumman Corporation and the University of Southern California (USC) Viterbi School of Engineering have teamed up to establish a new home for advanced research in optical materials and nanophotonic devices.

The new organization – the Northrop Grumman Institute of Nanophotonics and Nanomaterials (NG-ION²) – will be based on the USC campus in Los Angeles. It will bring together research teams from the university and the aerospace industry to explore the properties of tiny structures and materials that exist only at the atomic level.

Nanophotonics is the study of the behavior of light on the nanometer scale and of the interaction of nanometer-scale objects with light. A nanometer is one billionth of a meter. A sheet of paper is about 100,000 nanometers thick.

"The collaboration between USC Viterbi and Northrop Grumman has a long, productive and impactful history," said USC Viterbi Dean Yannis C. Yortsos. "NG-ION² will enhance our common ties and contribute significantly to the advancement of photonics, an area of historical strength at USC, and of critical importance to technological evolution."

Under the agreement, Northrop Grumman will contribute \$500,000 to NG-ION² in 2016. This funding will help foster interdisciplinary research by material scientists, electrical engineers, physicists and chemists to develop novel materials for optical devices.

Thanks and a tip of the hat to:

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