

**1, Is there any data on how many trucks coming in and out of LA/LB/Oakland ports? How many of them both come full loaded and leave full loaded?**

LA/LB:

The total number of trucks that actively service the Ports of LA and Long Beach is about 13,000. (the same fleet of trucks can call at any of the terminals at anytime),

These latest Monthly statistics for LA and Long Beach show:

POLA (Nov, 2017): Total Gate Moves (Full & Empty) 410,887

Full Containers 229,480

POLB (Dec, 2017): Total Gate Moves (Full & Empty) 306,417

Source:

[https://www.portoflosangeles.org/ctp/CTP\\_Monthly\\_Truck\\_Move\\_Analysis\\_November\\_2017.pdf](https://www.portoflosangeles.org/ctp/CTP_Monthly_Truck_Move_Analysis_November_2017.pdf)  
<http://www.polb.com/civica/filebank/blobdownload.asp?BlobID=6591>

**2, Is there any data on how many container vessels coming in and out of LA/LB/Oakland ports?**

POLA/POLB in 2017 had 2121 container vessel calls.

Port of Oakland in 2017 had approximately 1800 container vessel calls

**1, 有没有关于有多少辆卡车进出洛杉矶港/长滩港 /奥克兰港的数据？它们中有多少是满载进港并满载离港的？**

LA / LB: 活跃在洛杉矶港和长滩港的卡车总数约为 13,000 辆。

(这些卡车可随时在任何一个码头工作)。

最新的洛杉矶港和长滩港月度统计数据显示:

POLA (2017 年 11 月):

总闸门起降 (满和空) 410,887

满载集装箱 229,480

POLB (2017 年 12 月):

总闸门起降 (满和空) 306,417

数据源:

[https://www.portoflosangeles.org/ctp/CTP\\_Monthly\\_Truck\\_Move\\_Analysis\\_November\\_2017.pdf](https://www.portoflosangeles.org/ctp/CTP_Monthly_Truck_Move_Analysis_November_2017.pdf)  
<http://www.polb.com/civica/filebank/blobdownload.asp?BlobID=6591>

(补充自演讲问答: 洛杉矶港和长滩港主要是进口港, 绝大部分卡车都是空车进港满载离港; 奥克兰港进口和出口量大约各占一半, 双满载比例高一些, 具体数据暂缺。)

**2, 是否有洛杉矶港/长滩港/奥克兰港进出的集装箱船的数据?**

2017 年, 洛杉矶港和长滩港有 2121 艘集装箱船进出记录。

2017 年, 奥克兰港有接近 1800 艘集装箱船进出记录。

**3, How far is it from the terminal to rail track? What are the in ports travelling distance of the trucks transferring cargo from vessels to rail?**

Rail facilities at the Ports of LA and Long Beach are both on-dock and off-dock.

Nearly every Container shipping terminal has an ondock rail yard, which means that the containers can go straight from the ship to the train without going to a railyard.

These on-dock railyards are serviced by a short-haul rail company “the Pacific Harbor Line” (PHL)  
[https://www.anacostia.com/sites/www.anacostia.com/files/assets/PHL\\_timetable\\_map.pdf](https://www.anacostia.com/sites/www.anacostia.com/files/assets/PHL_timetable_map.pdf)

BUT not all of the cargo that needs to move by rail can be loaded on-dock, so for the other cargo it needs to be trucked to a railyard operated by either of our national railroads serving the West Coast: the Union Pacific or the BNSF.

The Union Pacific’s near-dock railyard: the “ICTF”, is about 5 miles from the Port.

The BNSF railyard the Hobart Yard is much less convenient, it is east of Downtown LA, about 25 miles from the Port. There is another UP yard nearby there as well.

See pages 11-12 of this powerpoint: [https://www.portoflosangeles.org/pdf/Rail\\_Workshop\\_Presentation.pdf](https://www.portoflosangeles.org/pdf/Rail_Workshop_Presentation.pdf)

Also:  
<https://www.anacostia.com/sites/www.anacostia.com/files/assets/PHL-LA-LBTml-Map081414.pdf>  
[https://www.anacostia.com/sites/www.anacostia.com/files/railroad\\_static\\_map\\_pdfs/PHL-LAMap0613.pdf](https://www.anacostia.com/sites/www.anacostia.com/files/railroad_static_map_pdfs/PHL-LAMap0613.pdf)

In OAKLAND, there is no on-dock rail. So trucks need to be hired for transport to near-dock rail, but conveniently there are two railyards across the street from the marine terminals.

One for the BNSF and one for the Union Pacific.  
[http://www.oaklandseaport.com/files/PDF/PoOak\\_16\\_OperationsFacilitesMap\\_V15\\_TRIFOLD\\_2.17.17\\_Page\\_1.jpg](http://www.oaklandseaport.com/files/PDF/PoOak_16_OperationsFacilitesMap_V15_TRIFOLD_2.17.17_Page_1.jpg)

**3, 港口码头到火车道距离有多远? 港区内将货物从船舶运输到火车的运输距离有多远?**

洛杉矶港和长滩港的港铁运输都是码头直运的。几乎每一个集装箱运输码头都有铁路场站, 也就是说, 集装箱可以直接从船上运输到火车上, 不需要堆积在场站里。这些在港火车是由“太平洋港线 (PHL)”短途铁路公司运营的。

[https://www.anacostia.com/sites/www.anacostia.com/files/assets/PHL\\_timetable\\_map.pdf](https://www.anacostia.com/sites/www.anacostia.com/files/assets/PHL_timetable_map.pdf)

同时, 并不是所有的需要运送到火车上的货物都能直接转运的, 有些货物需要卡车运输到铁路, 铁路由国家铁路局西海岸分局即太平洋联合铁路局运营, 或是由 BNSF 运营。

太平洋联合铁路局的近港火车道, 大概离港口 5 英里左右。

BNSF 运营的港口铁路便利性差一些, 位于洛杉矶市中心东侧, 距离港口大概 25 英里。离港口不太远还有另一家太平洋联合铁路局在运营。详情请见该文件的 11-12 页  
[https://www.portoflosangeles.org/pdf/Rail\\_Workshop\\_Presentation.pdf](https://www.portoflosangeles.org/pdf/Rail_Workshop_Presentation.pdf)

以及:  
<https://www.anacostia.com/sites/www.anacostia.com/files/assets/PHL-LA-LBTml-Map081414.pdf>  
[https://www.anacostia.com/sites/www.anacostia.com/files/railroad\\_static\\_map\\_pdfs/PHL-LAMap0613.pdf](https://www.anacostia.com/sites/www.anacostia.com/files/railroad_static_map_pdfs/PHL-LAMap0613.pdf)

奥克兰港没有在港火车, 需要雇佣集卡来进行近港运输, 但是有两条铁路线就在海港的马路对面。一条是 BNSF 的, 一条是太平洋联合铁路局的。

[http://www.oaklandseaport.com/files/PDF/PoOak\\_16\\_OperationsFacilitesMap\\_V15\\_TRIFOLD\\_2.17.17\\_Page\\_1.jpg](http://www.oaklandseaport.com/files/PDF/PoOak_16_OperationsFacilitesMap_V15_TRIFOLD_2.17.17_Page_1.jpg)

#### 4, What's the evaluating measures/indexes for measuring how efficient is it of ports operation/multimodal connection?

There is great debate amongst the intermodal supply chain about what the most important KPIs (Key Performance Indicators) are for port and marine terminal operational efficiency. Some of these include:

Container Dwell Time – which measures how long (usually in days) an individual shipping container sits at a port terminal. Efficiency metric: the shorter the dwell time, the higher the utilization rate of the terminal.

Container Volumes – which measures how many containers will move through a terminal (usually in containers/acre/time period). Efficiency metric: the more containers which can move per acre, the higher the utilization rate of the terminal.

Crane Move Rates (also called “voyage productivity”) – which measures how fast a ship to shore crane can load or off-load a ship from a specific terminal (usually in moves per hour). Efficiency metric: the faster that containers can move on or off the vessel, the higher utilization rate of the terminal.

Trucker Turn Times – which measures the amount of time that it takes a truck to come and drop off or pick up a container (usually in minutes per transaction). Efficiency metric: the more trips that trucks can make per day to the port, the higher the utilization rate of the terminal.

All terminals, ports compete on all of these bases.

PMSA tracks Container Dwell Times at the Ports of LA/LB and we typically release these on a monthly basis.

Example: see page 9 of the December 2017 PMSA West Coast Trade Report: <http://www.pmsaship.com/pdfs/West%20Coast%20Trade%20Report%20-%20December%202017.pdf>

#### 4, 有哪些标准或指标来评估港口的多式联运是否高效?

关于评估港口及码头的运营效率的关键绩效指标 (KPI, Key Performance Indicators), 在多式联运供应链相关方中有许多争论。这些讨论的指标包括:

集装箱停留时间——衡量一艘集装箱船在一个码头停留的时间 (通常以天计)。效率指标: 停留时间越短, 码头的利用率越高。

集装箱量——衡量一个港口运营了多少个集装箱 (通常以集装箱数量/英亩/时间计)。效率指标: 每英亩面积上运营的集装箱越多, 码头的利用率越高。

起重机移动速率 (也称为“航程生产率”) ——衡量船到岸起重机能够以多快的速度从特定码头装载或卸载船舶 (通常以每小时移动次数计)。效率指标: 集装箱可以在船上或船上移动的速度越快, 码头的利用率就越高。

卡车司机转弯时间 - 测量卡车到达和卸下集装箱所需的时间 (通常每个运行的分钟数计)。效率指标: 卡车每天向港口出行的次数越多, 码头的利用率就越高。

所有的码头、港口都在基于这些指标进行竞争。

PMSA 跟踪 LA / LB 港口的集装箱停留时间, 我们通常每月发布这些信息。

例如: 参见 2017 年 12 月 PMSA 西海岸贸易报告的第 9 页

<http://www.pmsaship.com/pdfs/West%20Coast%20Trade%20Report%20-%20December%202017.pdf>

**5, Besides subsidize efficient operation of terminals, what's the other important issues in promoting the multimodal integration transportation?**

One of the biggest issues facing the intermodal supply chain globally right now is making sure that marine terminals are properly equipped and ready for the latest generations of Ultra Large Container Vessels which are now over 20,000 TEUs. While vessels get steadily larger, the lead time for the development of marine terminals is much more static and costly.

Here is the average TEU capacity of the containership fleet:

[http://www.scdigest.com/images/Megaship\\_Growth.gif](http://www.scdigest.com/images/Megaship_Growth.gif)

If terminal capacity is not developed at the same rate as vessel capacity, it results in congestion, inefficiency, and delays. Likewise, if trucking & rail resources are all descending on the terminal to do business at the same time because vessels are discharging more cargo per ship then there can be additional pressure at the intermodal terminal gates and on the longshore and equipment resources in the container yard because you are trying to do more transactions in the same period of time.

**5, 除了补贴码头高效运营外, 推动多式联运一体化的其他重要问题还有哪些?**

目前全球多式联运供应链面临的最大问题之一是确保海运码头装备适当, 并能适用于现在往往超过 20,000 TEU 的最新一代超大型集装箱船。船舶尺寸在稳步地不断增加, 但海运码头对应进行扩容的较为滞后和昂贵。

以下是集装箱船队的平均 TEU 容量:

[http://www.scdigest.com/images/Megaship\\_Growth.gif](http://www.scdigest.com/images/Megaship_Growth.gif)

如果码头能力不能像船舶运力一样发展, 就会导致码头拥堵、效率低下和延误。同样, 如果在船舶每艘船都运载更多货物的同时, 同期运行于衔接码头的卡车货运和铁路资源却在下降, 那么可能会对联运码头口岸、集装箱堆场的岸边和设备资源产生额外的压力, 因为这是在试图在同样时间段内完成更多运转。

**6, Based on the experience of LA/LB/Oakland ports, what's the most cost-effective emission reduction practices?**

We have seen the largest emissions reductions with the highest cost-effectiveness in the programs to reduce Diesel Particulate Matter from Trucks and Cargo Handling Equipment through the adoption of new model year and best available control technology rules and to reduce Sulfur Oxides (SOx) from Ocean-going vessels by implementing low-sulfur fuel programs and vessel-speed reduction programs.

In California these are all developed by the California Air Resources Board (CARB). These are highly technical rules which govern when new equipment needs to be purchased and introduced or when cleaner fuels need to be used. But these have proven to be effective and implemented in a way which is more business-friendly than other types of regulations.

The Cargo Handling Equipment rules were adopted in 2006 and required that by 2013 and 2017 that all in-use non-yard truck engines must have a Verified Diesel Emission Control Strategy (VDECS) installed. All Tier 3 and older engines that were compliant at time of purchase were required to have a Level 3 VDECS installed one year after purchase. All newly purchased yard truck and non-yard truck equipment brought onto a port or intermodal rail yard must have either a Tier 4 Final off-road engine or a model year (MY) 2010 or newer on-road engine. For more details: <https://www.arb.ca.gov/ports/cargo/cargo.htm>

The Drayage Truck regulations essentially require that all heavy-duty port trucks be either a 2010 or newer model truck or have a 2007 engine (or an engine which is retrofitted to meet 2007 standards). No trucks older than 1993 model year are allowed on a Port. For more details on this rule: <https://www.arb.ca.gov/msprog/onroad/porttruck/porttruck.htm>

For vessels, we have both a regulation for Fuel use and incentives for Vessel speed reduction.

**6, 基于洛杉矶港/长滩港/奥克兰港口的经验, 有哪些最具成本效益的减排措施?**

对于减排货运卡车和港口运行设备的柴油颗粒物排放, 最成本有效的政策也是实现了最大减排的政策, 就是采用更新的车型和使用最佳可得技术减排的规定; 对于减排远洋船舶的硫氧化物 (SOx) 排放, 最成本有效的政策是实施低硫油政策和船舶降速项目。

在加州, 这些都是由加州空气资源委员会 (CARB) 实施的。这些是高度技术性的规则, 决定何时需要购买和引入新设备或何时需要使用清洁燃料。这些政策已被证明非常有效, 并且以比其他类型的法规更加商业友好的方式实施。

货物装卸设备规则于 2006 年通过实施, 并要求到 2013 年和 2017 年所有使用中的非货场卡车发动机必须安装经过验证的柴油机排放控制策略 (VDECS)。所有 Tier 3 标准和更老的发动机的设备购买时符合要求的, 都被要求在购买后的一年后安装 3 级 VDECS。

所有进入港口或多式联运铁路车场的新购的车场卡车和非车场卡车设备必须具有 Tier 4 Final 越野发动机或 2010 年型号 (MY) 或更新的道路发动机。

欲了解更多详情, 请访问: <https://www.arb.ca.gov/ports/cargo/cargo.htm>

拖挂货车法规基本上要求所有重型卡车是 2010 或更新的卡车车型, 或者是 2007 年的发动机 (或者改装后的发动机满足 2007 年的标准)。早于 1993 年的卡车在任何港口都不允许运行。

有关此规则的更多详细信息, 请访问: <https://www.arb.ca.gov/msprog/onroad/porttruck/porttruck.htm>

The state regulation for Low-Sulfur Fuel is identical to the North American Emission Control Area (ECA) standards which were adopted under the International Maritime Organization (IMO MARPOL). The North American ECA provides for designated U.S. and Canadian waters up to 200 nautical miles off-shore to require that vessels use non-distillate low sulfur (< 0.1% S) marine fuels or alternative emission control technology.

The ports of LA and Long Beach also have a very effective vessel speed reduction program. The details of this successful emissions reduction program are here:

<https://www.portoflosangeles.org/environment/progress/initiatives/vessel-speed-reduction-program/>

**7, What's the reason of the 2006 peaking of LA/LB/Oakland ports? Was it because the opening of Panama Canal and ships go to the east coast? Will you project this situation to continue?**

We only have anecdotal evidence to rely on to answer this question, but the major contributing factors seem to be increased California costs of doing business (including environmental costs, labor costs, new fees), the development of more alternative gateways and competitors investing more in new infrastructure, and the business uncertainty associated with labor and congestion and taxes on cargo.

The new Panama Canal expansion only became operational in 2016, so losses of market share prior to 2016 were not attributable to the elimination of this competitiveness bottleneck. Unfortunately, since this time, the Atlantic and Gulf of Mexico ports have continued to take market share from the US West Coast.

There is no reason to believe that these trends will not continue until California finds a new way to reinvest in Port infrastructure which is more efficient and boosts container throughput per acre.

对于船舶，我们既有燃料使用规定，也有船舶减速的激励措施。

加州对低硫燃料的规定与国际海事组织（IMO MARPOL）通过的北美排放控制区（ECA）标准相同。北美ECA规定离岸200海里的指定美国和加拿大水域要求船舶使用非馏分低硫（<0.1% S）船用燃油或替代排放控制技术。

洛杉矶和长滩的港口还实施了非常有效的船舶降速项目。这个成功的减排计划的细节在这里

<https://www.portoflosangeles.org/environment/progress/initiatives/vessel-speed-reduction-program/>

**7, 洛杉矶港/长滩港/奥克兰港周转量在2006年到达峰值后下降的原因是什么？是因为巴拿马运河的开通和船舶分流到东海岸吗？您预测这种情况会继续吗？**

回答这个问题我们目前仅有一些传闻作为证据，但主要的原因似乎还是加州的运营成本（包括环境成本、人工成本、新费用）的增加，更多替代港口的开发、竞争对手投资更多新的基础设施，以及与劳动力和交通拥堵以及货物税有关的商业不确定性。

扩建后的巴拿马运河在2016年才投入运营，因此在2016年之前的市场份额损失并非归因于这个竞争力瓶颈的消除。不幸的是，自此以后，大西洋和墨西哥湾港口将继续从美国西海岸夺取市场份额。

我们没有理由相信这些趋势不会持续下去，除非加州找到新的方式对港口基础设施进行再投资、港口基础设施效率更高，并提高每英亩的集装箱吞吐量。