



California SCAQMD WAIRE Program

Rule 2305

Orange EV Pure Electric Terminal Trucks



Better trucks for your people and your bottom line

- Safer, cooler, smoother, quieter, cleaner
 - Zero emission
 - No diesel engine, transmission, cooling, or emission control
 - All brushless induction motors
 - Regenerative braking
 - 50% shorter stopping distance
- Operate up to 24+ hours on a single charge
- Lower total cost of ownership
- Telematics provide real time operating data
- Chosen by more than 200 fleets in 35 states
- Deployed Orange EV fleet has surpassed 10.8 million miles and 3.6 million hours of operation
- Earn significant WAIRE points – and offset mitigation fees - by purchasing, operating, and charging Orange EV trucks



South Coast Air Quality Management District (SCAQMD) Warehouse Indirect Source Rule (ISR)

Rule 2305:

Warehouse Actions and Investments to Reduce Emissions (**WAIRE**) Program

***Region affected:** California's South Coast Air Quality Management District which includes large areas of Los Angeles, Orange County, Riverside and San Bernardino counties, including the Coachella Valley.*

***Purpose:** To reduce local and regional emissions of nitrogen oxides and particulate matter, and to facilitate local and regional emission reductions associated with warehouses and the mobile sources attracted to warehouses in order to assist in meeting state and federal air quality standards for ozone and fine particulate matter.*

All questions regarding program implementation should be posed directly to the WAIRE compliance team: Waire-program@aqmd.gov, 909-396-3140

Program resources will be posted at: www.aqmd.gov/waire

WAIRE Applicability



WAIRE applies to owners and operators of **warehouses >100,000 ft²** located within SCAQMD boundaries. Operators of **>50,000 ft²** of such warehouses are required to earn WAIRE points.

- **Owner:** The legal, beneficial, and/or equitable owner or owners of a warehouse facility
- **Operator:** The entity who conducts day-to-day operations at a warehouse, either with its employees or through the contracting out of services for all or part of the warehouse operations. A warehouse operator can be, but is not necessarily, the warehouse owner.

Note that if a warehouse operator contracts with a 3rd party operator using ZE yard trucks, the warehouse operator may earn WAIRE usage points for the operation and charging of those trucks; WAIRE “acquire” points in this scenario are TBD.

Timeline & Requirements



Operator requirements:

- **Earn required WAIRE points OR pay mitigation fee** of \$1,000 per required WAIRE point. Points will be phased in:
 - The size of the warehouse determines when point-earning must begin; see Table 1
 - The points required increase over time

Table 1 – Implementation Schedule

Phase	Warehouse Size (square feet)	Initial Site Information Report Due Date	First Annual WAIRE Report Due Date	Initial Compliance Period
1	> 250,000	July 1, 2022	January 31, 2023	January 1, 2022 to December 31, 2022
2	> 150,000- <250,000	July 1, 2023	January 31, 2024	January 1, 2023 to December 31, 2023
3	> 100,000- <150,000	July 1, 2024	January 31, 2025	January 1, 2023 to December 31, 2024

From WAIRE Implementation Guidelines

- Submit annual **Site Information Report** and **WAIRE Report**. Initial Site Information Report (ISIR) due no later than July 1 of the year that first Annual WAIRE Report is required. *Example: Phase 2 warehouse operators collect 12 months of truck trip data starting July 1, 2022, for ISIR report due July 1, 2023.*
- Keep applicable records

Owner requirements:

- Submitted first **Warehouse Operations Notification** by September 1, 2021
- Notify when there are changes in warehouse operations
- Keep applicable records



WAIRE Points Compliance Obligation (WPCO)

The number of WAIRE points a warehouse operator must earn in the applicable compliance period (i.e., one calendar year) is called the annual WAIRE Points Compliance Obligation (WPCO).

To determine WPCO, first calculate Weighted Annual Truck Trips (WATTs). If you have truck trip data:

- **WATTS** = [Class 2b to 7 truck trips] + [2.5 × Class 8 truck trips]
- Note that Class 8 truck trips, for example, count all Class 8 trucks/tractors entering or leaving a warehouse site, whether or not they have a load attached

To calculate WPCO:

- **WPCO** = WATTS x Stringency x Annual Variable
- Stringency = 0.0025
- Annual Variable = See “Table 2 – Annual Variable”

Table 2 – Annual Variable

Annual WAIRE Report Year*	Annual Variable		
	Phase 1	Phase 2	Phase 3
2022	0.33	0	0
2023	0.67	0.33	0
2024	1.0	0.67	0.33
2025	1.0	1.0	0.67
2026 and beyond	1.0	1.0	1.0

*This is the compliance period for which a warehouse operator is first required to submit its Annual WAIRE Report.

From WAIRE Implementation Guidelines

WAIRE Menu



Operators may earn points by completing actions on the WAIRE menu or by using a custom WAIRE plan. Applications for custom plans are due > 9 months before the annual WAIRE report is due.

WAIRE menu action items applicable to yard trucks:

Action/Investment	Action/Investment Details	Reporting Metric	Annualized Metric	WAIRE Points per Annualized Metric	Discounted WAIRE Points Subparagraph (d)(6)(A)
Acquire ZE Yard Truck		Number of yard trucks	One yard truck acquired	177	177
Use ZE Yard Truck		Hours of use	1,000 hours	291	51
Install Onsite ZE Charging or Fueling Infrastructure	150-350 kW EVSE Acquisition	Number of EVSE purchased	One EVSE purchased	118	118
	51-149 kW EVSE Acquisition			51	51
	19.2-50 kW EVSE Acquisition			26	26
	Up to 19.2 kW EVSE Acquisition			5	5
	TRU Plug EVSE Acquisition			3	3
	Begin construction on 19.2-350 kW charger project	First day of construction	One construction project	9	9
	Begin construction on up to 19.2 kW charger project			5	5
	Begin construction on TRU Plug project			5	5
	Finalize 19.2-350 kW Level charger project	The latter of final permit sign off or charger energization	One construction project	59	59
	Finalize up to 19.2 kW charger project			5	5
	Finalize TRU Plug project			7	7
	Hydrogen (H ₂) Station	Daily capacity of station in kilograms (kg)	One 700 kg/day station construction project	1,680	1,680
Use Onsite ZE Charging or Fueling Infrastructure	Vehicle Charging	Kilowatt-hours (kWh) of dispensed electricity	165,000 kWh	42	24
	TRU Charging		10,658 kWh	10	3
	H ₂ Station Usage	Kg of dispensed H ₂	6,152 kg	43	25

From Rule 2305 adopted 5/7/21



WAIRE Points Examples

Operators may earn points by purchasing and/or using all-electric yard trucks, and purchasing, installing, and/or using EVSE for those trucks. The examples below show the potential points earned for deploying Orange EV's **Standard Duty truck with Enhanced Charging** and **Extended Duty truck with Fast Charging**.

				1 Standard Duty Truck w/Enhanced Charging Cabinet		1 Extended Duty Truck w/Fast Charging Cabinet	
WAIRE Menu Action	Units	Points	Annualized Metric	DATA for SD w/ ECC	Points for SD w/ ECC	DATA for ED w/ FCC	Points for ED w/ FCC
Acquire ZE Yard Truck	# of yard trucks (#)	177		1	177	1	177
Use ZE Yard Truck	Hours of use (hrs)	291	1,000	4,000	1,164	6,000	1,746
150-350 kW EVSE Acquisition	# of EVSE purchased (#)	118		0	0	0	0
51-149 kW EVSE Acquisition	# of EVSE purchased (#)	51		0	0	1	51
19.2-50 kW EVSE Acquisition	# of EVSE purchased (#)	26		1	26	0	0
Up to 19.2 kW EVSE Acquisition	# of EVSE purchased (#)	5		0	0	0	0
Begin construction on 19.2-350 kW charger project	# of construction projects initialized (#)	9		1	9	1	9
Begin construction on up to 19.2 kW charger project	# of construction projects initialized (#)	5		0	0	0	0
Finalize 19.2-350 kW charger project	# of construction projects finalized (#)	59		1	59	1	59
Finalize up to 19.2 kW charger project	# of construction projects finalized (#)	5		0	0	0	0
Vehicle Charging	kWh of dispensed electricity (kWh); DATA field shows kWh/hr usage	42	165,000	6	6	8	12
Total WAIRE Points:					1,441		2,054
Mitigation Fee at \$1,000/pt:					\$ 1,441,109		\$ 2,054,218
Base Cost for Orange EV Solution:					\$ 274,450		\$ 360,300
Potential Savings (if the Total WAIRE Points are required):					\$ 1,166,659		\$ 1,693,918



EVSE (Charging Cabinet) Points

In advance of a ZE yard truck being delivered, operators may acquire and install the necessary Electric Vehicle Supply Equipment (EVSE), earning three different categories of points as each milestone is completed:

- 1) **EVSE acquisition:** Purchased charging cabinets have been delivered to site
- 2) **Begin construction on charger project:** Construction mobilization
- 3) **Finalize charger project:** Final permit sign-off and charger energization

Potential “Install Onsite ZE Charging Infrastructure” WAIRE points to be earned:

22 kW Charging Cabinet = 94 Points*

Acquisition	26 Points
Begin construction	9 Points
Finalize charger project	59 Points

70 kW Charging Cabinet = 119 Points*

Acquisition	51 Points
Begin construction	9 Points
Finalize charger project	59 Points

** These points may be earned for each charging cabinet purchased and installed. If, for example, two 70 kW charging cabinets are purchased and installed, the operator could earn $119 \times 2 = 238$ WAIRE Points.*

Points Actions, Exemptions, & Telematics



- **Earning points:** WAIRE points shall only be earned for actions and investments completed during the compliance period.
- **Points carry-over:** If an operator earns more WAIRE points than required for its annual WPCO, it can use the remaining WAIRE points to satisfy the WPCO in any of the following 3 years.
- **Points transfers:** Points may be transferred between an operator's warehouses and from owner to operator at one warehouse. Restrictions apply.
- **Early action:** WAIRE Points earned prior to an operator's first compliance period may be banked and transferred up to three years after the operator's first compliance period. This must be documented in an Annual WAIRE Report.
- **Exemption:** A warehouse operator with a WPCO that is less than 10 in any compliance period is exempt from the requirement to earn WAIRE points for that compliance period, but they shall document their WPCO and exemption in an Annual WAIRE Report.
- **Telematics:** Among other methods, operators may use truck telematics data as documentation for truck and electricity usage.

Acquire Points & Incentives



- **“Acquire ZE Yard Truck”:** These points can be earned by purchasing, leasing or renting a new or used ZE yard truck.
 - “Acquire” refers to the date the truck is on-site and able to be put into service.
 - Acquire points are tracked by VIN and can only be earned once per Acquisition, up to 177 points max.
 - If a rental contract spans two compliance periods, Acquire points are pro-rated accordingly over each compliance period, up to 177 points max if rental contract is ≥ 1 year
- **Incentives:** If using purchase incentives, each program must be evaluated individually to determine if its use restricts the ability to earn WAIRE points. *Carl Moyer, Prop 1B, and HVIP cannot be used to purchase a truck and also earn WAIRE Points for truck acquisition. Other programs TBD.*

Truck Rentals/Leases



➤ Truck Rentals/Leases:

- ZE yard truck rentals/leases earn Use points as for a purchase.
- Acquire points are pro-rated: If a rental/lease contract spans two compliance periods, Acquire points are pro-rated accordingly over each compliance period, up to 177 points max if contract is ≥ 1 year
- Charger (EVSE) points:
 - EVSE acquisition: Can only earn points if part of a custom WAIRE plan.
 - Begin construction on / finalize charger project: Can only earn these points once, even if charger is subsequently replaced with another unit. If additional EVSE installed, can only earn points if it requires initiation of a new construction project and/or final permit sign-off.
 - Can earn points for use of EVSE based on kWh of electricity dispensed

Orange EV has provided the information in this presentation to the best of our knowledge and current understanding of the program. **For official determinations, refer to program documents (posted at www.aqmd.gov/waire) or contact the WAIRE compliance team (Waire-program@aqmd.gov, 909-396-3140).**



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