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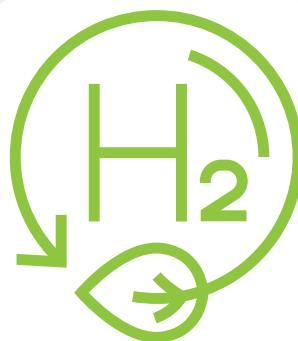


## **GREEN HYDROGEN READINESS ASSESSMENT**

Los Angeles, California

January 2023

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## A Note From SheppardMullin:

Green hydrogen is recognized as a key component of energy transition and reduced reliance on fossil fuels, especially in hard-to-electrify sectors. In order to develop a functioning hydrogen economy, one must understand the statutes, regulations, and regulatory bodies that will have oversight over hydrogen infrastructure across the value chain.

In March of 2021, Sandia National Laboratories published a report entitled *Federal Oversight of Hydrogen Systems*. Taking inspiration from Sandia's report, we set out to perform a complementary assessment of the state and local oversight potentially applicable to hydrogen systems in Los Angeles, California. In the ensuing pages, you will find a matrix that details such assessment using a methodology described in three tables that immediately follow this introduction:

- The first table provides a color-coding system for rating the extent to which a given regulation covers hydrogen. Importantly, any attempt to create simple categories like those detailed in this table necessarily involves interpretations and a measure of subjectivity. As a result, readers should read the underlying regulations and form their own conclusions, using the color-coding system only as a directional guide.
- The second table contains a legend for the various State, District, County and City authorities or regulatory bodies which have jurisdiction over constituent parts of the hydrogen ecosystem.
- The third table is essentially a table of contents which details how the subsequent pages are organized. In particular, the assessment proceeds through the hydrogen value chain in the following order: Production, Storage, Transportation (further detailed by means of transportation, including Pipeline, Road, Rail and Waterway) and Use (further detailed by type of use, including Electricity Generation, Chemical & Industrial Use, Use in Consumer/ Commercial Vehicles, Use in Rail, Use in Maritime and Use in Aviation).

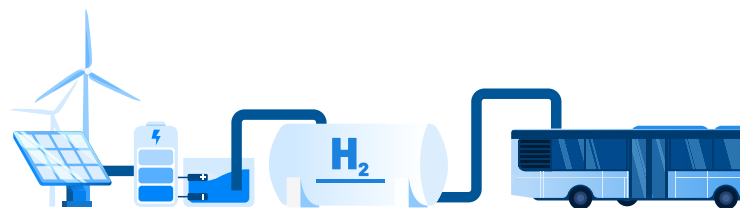
With over 85 attorneys on our Energy, Infrastructure and Project Finance Team, Sheppard Mullin is a nationally renowned leader in renewable and clean energy. We look forward to continuing to work with the Green Hydrogen Coalition and industry participants to realize the potential of green hydrogen, and we hope this report is a useful tool for analyzing the present to build the future.

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**Table 1: Assessment of regulation readiness for hydrogen**

Hydrogen specifically covered	May indirectly cover hydrogen	Does not cover hydrogen
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**Table 2: Abbreviations and Definitions**

State-level (California)	
BOE	California State Board of Equalization
BSC	Building Standards Commission
CalEPA	California Environmental Protection Agency
CalSTA	California State Transportation Agency
CARB	California Air Resources Board
CDFA	California Department of Food and Agriculture
CDTFA	California Department of Tax and Fee Administration
CEC	California Energy Commission (Energy Resources Conservation and Development Commission)
CHP	Department of the California Highway Patrol
CNRA	California Natural Resources Agency
CPUC	California Public Utilities Commission
DIR	Department of Industrial Relations
DMV	California Department of Motor Vehicles
DOC	Department of Conservation
DWR	Department of Water Resources
OAG	State of California Department of Justice
OES	California Governor's Office of Emergency Services
OSFM	California Office of the State Fire Marshall
SLC	California State Lands Commission
SWRCB	State Water Resources Control Board
District-level	
SCAQMD	South Coast Air Quality Management District
County of Los Angeles	
Board of Supervisors	County of Los Angeles Board of Supervisors
BLC	Business License Commission
DPW-County	Los Angeles County Department of Public Works
DRP	Los Angeles County Department of Regional Planning
LAFD-County	Los Angeles County Fire Department
LA County	Los Angeles County

City of Los Angeles	
City Council	Los Angeles City Council
DCP	Los Angeles Department of City Planning
DPW-City	Los Angeles Department of Public Works
LADBS	Los Angeles Department of Building and Safety
LAFD-City	Los Angeles Fire Department
RAP	Department of Recreation and Parks

**Table 3: Overview of Regulation and Oversight of Hydrogen Systems at State (California) and Local (Los Angeles) Level**

1. Production.....	6
2. Storage.....	7
3. Transportation by Pipeline.....	10
4. Transportation by Road.....	14
5. Transportation by Rail.....	19
6. Transportation by Waterways.....	21
7. Electricity Generation.....	22
8. Chemical & Industrial Use.....	24
9. Use in Consumer/ Commercial Vehicles.....	26
10. Use in Rail.....	29
11. Use in Maritime.....	29
12. Use in Aviation.....	31

System	Level	Oversight	Reference	Summary	H <sub>2</sub> Ready?
1. Production	State	CARB	<a href="#">Cal. Code Regs. tit. 17 § 95114</a>	Requirements for the mandatory reporting of greenhouse gas emissions from hydrogen production facilities	Applies to hydrogen production source category as defined in <a href="#">40 C.F.R. §98.160</a> and hydrogen production sources that produce molecular hydrogen
			<a href="#">Cal. Code Regs. tit. 17 § 95801 et seq.</a>	California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms	The operator of a hydrogen production facility in California is listed as a covered entity <sup>1</sup>
		CEC	<a href="#">Cal. Code Regs. tit. 20 §1383</a>	Reporting requirements for hydrogen plant data	Applies to each company that operates a major hydrogen plant in California
		DIR	<a href="#">Cal. Code Regs. tit. 8 § 2583.1 et seq.</a>	Low-Voltage Electrical Safety Orders relating to for electrolytic cells	<b>Does not</b> apply to cells used for production of hydrogen
	Local	DRP	<a href="#">Los Angeles County Code § 22.230 et seq.</a> and <a href="#">§ 22.150 et seq.</a>	Conditional use permit	Required for the manufacture of gas in Heavy Manufacturing and Heavy Industrial Zones; gas not defined <sup>2</sup>
		LAFD- County	<a href="#">Los Angeles County Code § 12.50.025</a> and <a href="#">§ 12.64.040</a>	Permits, plans and fees required by handlers of hazardous materials <sup>3</sup>	Hazardous material defined broadly to include any material that poses a hazard to human health and safety or the environment, but does not explicitly mention hydrogen <sup>4</sup>
			<a href="#">Los Angeles County Code § 105.6.16</a>	Operational permit required to operate equipment where flammable and combustible liquids are produced	Flammable and combustible liquids not defined
		DCP	<a href="#">Los Angeles Municipal Code § 12.20(36)(j)</a> and <a href="#">§ 12.24.1</a>	Land use and zoning	References gas manufacture as a land use allowed in heavy industrial zones; gas manufacturer not defined

<sup>1</sup> [Cal. Code Regs. tit. 17 § 95811.](#)

<sup>2</sup> [Los Angeles County Code § 22.22.030.](#)

<sup>3</sup> Handle means to generate or produce a hazardous material. [Los Angeles County Code § 12.64.010\(J\).](#)

<sup>4</sup> [Los Angeles County Code § 12.64.010\(L\).](#)



2. Storage	State	CARB	<a href="#">Cal. Pub. Util. Code § 972</a>	Determination of penalty for gas storage facility leak <sup>5</sup>	Penalty to be assessed against a gas corporation in regards to a natural gas storage facility
		CEC	<a href="#">Cal. Code Regs. tit. 20 § 1314</a>	Submission of quarterly fuel and energy reports by owners of underground gas storage projects	Underground gas storage project is defined as a project for the injection and withdrawal of natural gas specifically into an underground reservoir for the purpose of storage <sup>6</sup>
		CPUC	<a href="#">Cal. Pub. Util. Code § 958.5</a>	Gas transmission and storage safety report	Filing to be made by gas corporations <sup>7</sup>
			<a href="#">Cal. Pub. Util. Code § 1103</a>	Risk assessment of proposed underground gas storage facility	Underground gas storage facility not defined
		CPUC, CARB, CEC	<a href="#">Cal. Pub. Util. Code § 400.3</a>	Classification of green electrolytic hydrogen as an eligible form of energy storage	Explicitly references green hydrogen
		DIR	<a href="#">Cal. Code Regs. tit. 8 § 5465 et seq.</a>	Safety orders for delivery, storage, and discharge of hydrogen to consumer piping	Applies to gaseous and liquefied hydrogen systems <sup>8</sup>
		DOC	<a href="#">Cal. Pub. Res. Code § 3180 et seq.</a>	Testing, inventory, reporting inspection, and training with regards to gas storage wells	Gas storage well defined as a well used primarily to inject natural gas or withdraw natural gas from an underground natural gas storage facility <sup>9</sup>
			<a href="#">Cal. Pub. Res. Code § 3403.5</a>	Annual charge on operators of underground gas storage facilities	Gas defined as a natural hydrocarbon gas coming from the earth <sup>10</sup>
			<a href="#">Cal. Code Regs. tit. 14 § 1726 et seq.</a>	Requirements for underground gas storage projects	Underground gas storage project is defined as a project for the injection and withdrawal of natural gas specifically into an underground reservoir for the purpose of storage <sup>11</sup>

<sup>5</sup> Also includes reservation of authority to adopt rules and regulation to reduce greenhouse gas emissions at natural gas storage facilities or to require mitigation of natural gas leaks from those facilities.

<sup>6</sup> [Cal. Code Regs. tit. 20 § 1302\(74\)](#).

<sup>7</sup> See SoCalGas Ruling *infra* note 29.

<sup>8</sup> [Cal. Code Regs. tit. 8 § 5415](#).

<sup>9</sup> [Cal. Pub. Res. Code § 3180\(a\)](#).

<sup>10</sup> [Cal. Pub. Res. Code § 3007](#).

<sup>11</sup> [Cal. Code Regs. tit. 14 § 1726.1\(a\)\(6\)](#).

		SWRCB <sup>12</sup>	<a href="#">Cal. Health &amp; Saf. Code § 25280 et seq.</a>	Underground storage of hazardous substances	Hydrogen falls under the definition of a hazardous substance because it is explicitly listed on the CAL/OSHA Hazardous Substances List <sup>13</sup>
			<a href="#">Cal. Code of Regs. § 2610 et seq.</a>	Underground storage tank regulations	
			<a href="#">Cal. Code of Regs. § 2730 et seq.</a>	Tank tester license program	
			<a href="#">Cal. Health &amp; Saf. Code § 25404 et seq.</a>	Unified regulatory program for underground storage tanks	
		OSFM	<a href="#">Cal. Fire Code tit. 24 §5806.3</a>	Above-ground tanks for liquid hydrogen	Hydrogen explicitly mentioned
			<a href="#">Cal. Fire Code tit. 24 §5806.4</a>	Underground tanks for liquid hydrogen	Hydrogen explicitly mentioned
	Local	DPW-County <sup>14</sup>	<a href="#">Los Angeles County Code §12.50.030(C)</a>	Unified program: implementation of underground storage tank inspections and tank opening and closure reviews	Hydrogen is covered as defined in the state unified regulatory program statute <sup>15</sup>
		DPR	<a href="#">Los Angeles County Code § 22.230 et seq.</a> and <a href="#">§ 22.150 et seq.</a>	Conditional use permit	Required for the storage of industrial gas, including oxygen, acetylene, argon, carbon dioxide, and similar gases in Interstate commerce Commission approved-type cylinders in Light Manufacturing and Heavy Industrial zones; <sup>16</sup> hydrogen not explicitly mentioned

<sup>12</sup> Chapter 6.7 is implemented by the SWRCB, California regional water quality control boards, and local unified program agencies. [Cal. Health & Saf. Code § 25283](#). Local Unified Program Agencies under Chapter 6.11 include the DPW-County, LAFD-County, and LAFD-City. *Underground Storage Tank Program*, Los Angeles County Public Works, <https://pw.lacounty.gov/epd/UST/cupa.cfm> (last accessed July 21, 2022).

<sup>13</sup> [Cal. Health & Saf. Code § 25281\(h\)\(A\)](#); [Cal. Code. Regs. tit. 8 § 339](#).

<sup>14</sup> DPW-County is the administering agency for those jurisdictions where a city is not the administering agency for this program element. [Los Angeles County Code §12.50.030\(C\)](#).

<sup>15</sup> [Cal. Health & Saf. Code § 25281\(h\)\(A\)](#); [Cal. Code. Regs. tit. 8 § 339](#).

<sup>16</sup> [Los Angeles County Code § 22.22.030](#).



			<a href="#">Los Angeles County Code § 22.186 et seq.</a> and <a href="#">§ 22.226 et seq.</a>	Site plan review	Required for the storage of industrial gas, including oxygen, acetylene, argon, carbon dioxide, and similar gases in Interstate commerce Commission approved-type cylinders in Restricted Heavy Manufacturing and Heavy Manufacturing zones; <sup>17</sup> hydrogen not explicitly mentioned
		LAFD- County	<a href="#">Los Angeles County Code § 12.50.080 et seq.</a>	Unified program facility permit	Hydrogen is covered as defined in the state unified regulatory program statute <sup>18</sup>
			<a href="#">Los Angeles County Code § 12.50.025</a> and <a href="#">§ 12.64.040</a>	Permits, plans and fees required by handlers of hazardous materials <sup>19</sup>	Hazardous material defined broadly to include any material that poses a hazard to human health and safety or the environment, but does not explicitly mention hydrogen <sup>20</sup>
			<a href="#">Los Angeles County Code tit. 32 § 105.6.16</a>	Operational permit required to operate equipment where flammable and combustible liquids are stored	Flammable and combustible liquids not defined
			<a href="#">Los Angeles County Code tit. 32 § 105.6.20</a>	Operational permit required to store hazardous materials over certain amounts	Flammable materials listed but not defined <sup>21</sup>
		LAFD-City	<a href="#">Los Angeles Municipal Code § 57.105.3.9.1.2.1</a>	Permit to store, process or use hazardous materials above ground	Applies to flammable gases and liquified flammable gases over certain quantities; <sup>22</sup> flammable gases and liquified flammable gases not defined
			<a href="#">Los Angeles Municipal Code § 57.120 et seq.</a>	Unified program facility permit	Hydrogen is covered as defined in the state unified regulatory program statute <sup>23</sup>

<sup>17</sup> [Los Angeles County Code § 22.22.030.](#)

<sup>18</sup> [Cal. Health & Saf. Code § 25281\(h\)\(A\); Cal. Code. Regs. tit. 8 § 339.](#)

<sup>19</sup> Handle means to store a hazardous material. [Los Angeles County Code § 12.64.010\(J\).](#)

<sup>20</sup> [Los Angeles County Code § 12.64.010\(L\).](#)

<sup>21</sup> [Los Angeles County Code tit. 32 Table 105.6.20.](#)

<sup>22</sup> [Los Angeles Municipal Code § 57.105.6.17.](#)

<sup>23</sup> [Cal. Health & Saf. Code § 25281\(h\)\(A\); Cal. Code. Regs. tit. 8 § 339.](#)

			<a href="#">Los Angeles Municipal Code § 57.120.6.4.1</a>	Hourly rate for plan check and inspection activities associated with the installation, modification, abandonment, and site mitigation of underground storage tanks and facilities	
			<a href="#">Los Angeles Municipal Code § 57.121.2.1</a>	Hazardous Materials Release Response Plan	Applies to flammable compressed gases and cryogenic fluids above certain quantities; flammable compressed gases and cryogenic fluids not defined
			<a href="#">Los Angeles Municipal Code § 57.5706.4.1.1</a>	Permit to engage in the business of a bulk distributing station	Bulk distributing station defined as any distributing station where flammable or combustible liquids with a loading rack are received and stored in bulk for the purpose of distribution; <sup>24</sup> flammable or combustible liquids not defined
<b>3. Transportation by Pipeline</b>	State	CARB	<a href="#">Cal. Health &amp; Saf. Code § 38597</a> and <a href="#">Cal. Code Regs. tit. 17 § 95300 et seq.</a>	Schedule of fees to be paid by sources of greenhouse gas emissions	Applies to natural gas utilities, users, and pipeline owners and operators that deliver or use natural gas <sup>25</sup>
		CARB, CPUC	<a href="#">Cal. Pub. Util. Code § 975</a>	Rules and regulations to reduce leaks; reporting	Article titled "Methane Leakage Abatement", but applies to gas pipeline facilities, defined in reference to <a href="#">49 U.S.C. § 60101 et seq.</a> under which PHMSA regulates hydrogen pipelines <sup>26</sup>
		CNRA	<a href="#">Cal. Gov. Code § 4216 et seq.</a> <sup>27</sup>	Regional notification center membership	Applies to operators of subsurface installations, defined to include any underground pipeline or other structure; <sup>28</sup> pipeline not defined

<sup>24</sup> [Los Angeles Municipal Code § 57.105.6.7.](#)

<sup>25</sup> [Cal. Code Regs. tit. 17 § 95201\(a\)\(1\).](#)

<sup>26</sup> [Cal. Pub. Util. Code § 950\(a\).](#)

<sup>27</sup> May also be enforced by the Registrar of Contractors of the Contractors State License Board, CPUC, and OSFM. [Cal. Gov. Code § 4216.6.](#)

<sup>28</sup> [Cal. Gov. Code § 4216.](#)

		CPUC	<a href="#">Cal. Pub. Util. Code § 701</a>	Supervision and regulation of public utilities	CPUC declined to rule on the issue of whether SoCalGas's Angeles Link hydrogen pipeline project would provide regulated public utility service that falls under its jurisdiction <sup>29</sup>
			<a href="#">Cal. Pub. Util. Code § 784</a>	Gas corporation pipeline access rules	Ensures access to physical interconnection with gas pipeline system to effectuate the delivery of gas <sup>30</sup>
			<a href="#">Cal. Pub. Util. Code § 955</a>	Natural gas pipeline safety	Does not reference hydrogen gas, but references <a href="#">49 U.S.C. §60101 et seq.</a> under which PHMSA regulates hydrogen pipelines <sup>31</sup>
			<a href="#">Cal. Pub. Util. Code § 958.5</a>	Gas transmission and storage safety report	Filing to be made by gas corporations <sup>32</sup>
			<a href="#">Cal. Pub. Util. Code §1003, 1003.5, and 1007</a>	Certificates of Public Convenience and Necessity	Required for new construction or extension by a gas corporation <sup>33</sup> or operation of any vessel for the transportation of property for compensation between points in the state
			<a href="#">Cal. Pub. Util. Code § 1091 et seq.</a>	Evaluation by construction project board of consultants	Required when application is made for certification of a gas plant, line, or extension <sup>34</sup>
		DOC	<a href="#">Cal. Pub. Res. Code § 3270.5(a)</a>	Review and evaluation of regulations regarding gas pipelines	Gas is defined as a natural hydrocarbon gas coming from the earth <sup>35</sup>
			<a href="#">Cal. Pub. Res. Code § 3270.5(b)</a>	Identification of active gas pipeline location and periodic inspections	

<sup>29</sup> Assigned Commissioner's Scoping Memo and Ruling on Application 22-02-007 of Southern California Gas Company (U904G) for Authority to Establish a Memorandum Account for the Angeles Link Project Before the Public Utilities commission of the State of California, 5-8 (May 10, 2022) <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M475/K477/475477428.PDF> [hereinafter SoCalGas Ruling].

<sup>30</sup> It is not clear how this is applicable to hydrogen gas. See *id.* See also [Cal. Pub. Util. Code § 784.1](#) explicit treatment of biomethane gas.

<sup>31</sup> [Cal. Pub. Util. Code § 950\(a\)](#).

<sup>32</sup> See SoCalGas Ruling *supra* note 29.

<sup>33</sup> It is not clear whether a hydrogen gas company would fall under the definition of a gas corporation. See *id.*

<sup>34</sup> It is not clear whether a hydrogen gas pipeline would fall under the definition of a gas plant. See *id.*

<sup>35</sup> [Cal. Pub. Res. Code § 3007](#).

			<a href="#">Cal. Pub. Res. Code § 3270.6</a>	Notice of leak from active gas pipeline within sensitive area	
			<a href="#">Cal. Code Regs. tit. 14 § 1774</a>	Pipeline construction and maintenance in accordance with good oil field practices	Pipeline is defined as a tube through which combustible gases flow from one point to another within the boundaries of an oil or gas field, <sup>36</sup> but field is defined as an area underlain by an underground accumulation of crude oil or natural gas <sup>37</sup>
			<a href="#">Cal. Code Regs. tit. 14 1774.1(a)</a>	Visual inspection of all aboveground pipelines	
			<a href="#">Cal. Code Regs. tit. 14 1774.1(b)</a>	Inspection of all active gas pipelines in sensitive areas	Gas is defined as a natural hydrocarbon gas coming from the earth <sup>38</sup>
			<a href="#">Cal. Code Regs. tit. 14 1774.1(c)</a>	Inspections necessary to establish the reliability of any pipeline system	Pipeline is defined as a tube through which combustible gases flow from one point to another within the boundaries of an oil or gas field, <sup>39</sup> but field is defined as an area underlain by an underground accumulation of crude oil or natural gas <sup>40</sup>
			<a href="#">Cal. Code Regs. tit. 14 § 1774.1(d), (e), and (f)</a>	Mechanical integrity testing of any pipeline with a leak, active environmentally sensitive gathering lines, urban pipelines, and active gas pipelines in sensitive areas	Pipeline is defined as a tube through which combustible gases flow from one point to another within the boundaries of an oil or gas field, <sup>41</sup> but field is defined as an area underlain by an underground accumulation of crude oil or natural gas <sup>42</sup> ; gathering line defined as a pipeline that transports liquid hydrocarbons; <sup>43</sup> gas defined as a natural hydrocarbon gas coming from the earth <sup>44</sup>

<sup>36</sup> [Cal. Code Regs. tit. 14 § 1760\(q\)](#). Note that pipelines subject to OSFM jurisdiction are exempt from this definition.

<sup>37</sup> [Cal. Code Regs. tit. 14 § 1760\(g\)](#).

<sup>38</sup> [Cal. Code Regs. tit. 14 § 1760\(k\)](#).

<sup>39</sup> [Cal. Code Regs. tit. 14 § 1760\(q\)](#). Note that pipelines subject to OSFM jurisdiction are exempt from this definition.

<sup>40</sup> [Cal. Code Regs. tit. 14 § 1760\(g\)](#).

<sup>41</sup> [Cal. Code Regs. tit. 14 § 1760\(q\)](#). Note that pipelines subject to OSFM jurisdiction are exempt from this definition.

<sup>42</sup> [Cal. Code Regs. tit. 14 § 1760\(g\)](#).

<sup>43</sup> [Cal. Code Regs. tit. 14 § 1760\(l\)](#).

<sup>44</sup> [Cal. Code Regs. tit. 14 § 1760\(k\)](#).

			<a href="#">Cal. Code Regs. tit. 14 § 1774.2</a>	Pipeline management plans	Pipeline is defined as a tube through which combustible gases flow from one point to another within the boundaries of an oil or gas field, <sup>45</sup> but field is defined as an area underlain by an underground accumulation of crude oil or natural gas <sup>46</sup>
		OSFM	<a href="#">Cal. Gov. Code § 51011</a>	Hazardous liquid pipeline safety regulations	Does not include transportation of a hazardous liquid substance in a gaseous state, <sup>47</sup> but statements by OSFM <sup>48</sup> and Air Products and Chemicals, Inc. <sup>49</sup> suggest broader jurisdiction
	Local	Board of Supervisors, <sup>50</sup> City Council <sup>51</sup>	<a href="#">Cal. Pub. Util. Code § 6231 and 6231.5</a>	Application for gas or oil franchise from municipality	Covers application for franchise to build and operate a pipeline system transmitting oil or unspecified products thereof
		Board of Supervisors	<a href="#">Los Angeles County Code § 16.52 et seq.</a>	Pipeline franchises	Pipeline not defined
		DPR	<a href="#">Los Angeles County Code § 22.230 et seq.</a> and <a href="#">§ 22.150 et seq.</a>	Conditional use permit	Required for pipelines in Rural Commercial zones <sup>52</sup>
		DPW-County	<a href="#">Los Angeles County Code § 2.26.140</a>	Permits to and from public utilities within the county (but excluding franchises) for pipelines	Pipeline not defined

<sup>45</sup> [Cal. Code Regs. tit. 14 § 1760\(q\)](#). Note that pipelines subject to OSFM jurisdiction are exempt from this definition.

<sup>46</sup> [Cal. Code Regs. tit. 14 § 1760\(g\)](#).

<sup>47</sup> [Cal. Gov. Code § 51010.5](#).

<sup>48</sup> Pipeline Safety Division News and Resources, <https://osfm.fire.ca.gov/divisions/pipeline-safety-and-cupa/pipeline-safety-news-and-resources/#Regulations> (last visited July 12, 2022)

<sup>49</sup> Protest of Air Products and Chemicals, Inc. to Application 22-02-007 of Southern California Gas Company (U904G) for Authority to Establish a Memorandum Account for the Angeles Link Project Before the Public Utilities commission of the State of California, 6 (March 18, 2022) <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M460/K301/460301926.PDF>.

<sup>50</sup> Municipality includes counties, but no county shall grant a franchise pursuant to Chapter 2 in any incorporated area. [Cal. Pub. Util. Code § 6201.5](#).

<sup>51</sup> Regulation of public utilities by the City of Los Angeles may not conflict with any paramount regulation, rate fixing or extension requirements for any such utility or service by the State or nation. [Los Angeles Admin. Code § 13.1\(b\)](#). Every application made to the City Council for a franchise, permit or privilege shall first be referred to the City board, commission, office or department having jurisdiction over the matter for review and recommendation on the application. [Los Angeles Admin. Code § 13.12\(a\)](#).

<sup>52</sup> [Los Angeles County Code § 22.24.030](#).

			<a href="#">Los Angeles County Code § 16.18.020, § 16.18.040, § 16.18.050, § 16.18.070, and § 16.18.080</a>	Requirements for pipelines carrying hazardous substances below the surface of a highway	Hazardous substance means one having the potential or an immediate disaster, such as, but not limited to gasoline, fuel oil, butane, propane, chemicals, or chlorine, and natural gas transported at pressures greater than 60 psi; <sup>53</sup> hydrogen not explicitly mentioned
		LAFD-County	<a href="#">Los Angeles County Code § 16.38.350</a>	Approval for excavation permit for the construction or installation of any pipeline for the transmission of flammable liquids or gases, which are heavier than air	Hydrogen gas is lighter than air <sup>54</sup>
			<a href="#">Los Angeles County Code tit. 32 § 105.6.20</a>	Operational permit required to store hazardous materials over certain amounts	Flammable materials listed but not defined <sup>55</sup>
		City Council	<a href="#">Los Angeles Admin. Code § 13.1 et seq.</a>	Granting of franchises, permits and privileges	Applies to franchises, permits, or privileges relating to pipes for the purpose of transmitting power, heat, electricity or electric energy; <sup>56</sup> hydrogen not explicitly included
		DPW-City	<a href="#">Los Angeles Municipal Code § 62.02</a>	Permits required for excavation under public places	Applies to excavation for the purpose of installation, inspection, repair, abandonment, or removal of any pipe or for any other purpose; pipe not defined
<b>4. Transportation by Road</b>	State	BOE, CalEPA	<a href="#">Cal. Pub. Util. Code § 7714.5</a> and <a href="#">Cal. Rev. &amp; Tax Code § 43087</a>	Fee paid by surface transporter of hazardous material; collected by BOE	Compressed hydrogen included by reference to federal regulations within the definition of hazardous material; <sup>57</sup> but hydrogen not listed as one of the 25 most hazardous material commodities in OES regulations <sup>58</sup>

<sup>53</sup> [Los Angeles County Municipal Code § 16.04.080.](#)

<sup>54</sup> *Hydrogen Safety: Let's Clear the Air*, <https://www.nrdc.org/experts/christian-tae/hydrogen-safety-lets-clear-air> (last accessed July 22, 2022).

<sup>55</sup> [Los Angeles County Code tit. 32 Table 105.6.20.](#)

<sup>56</sup> [Los Angeles Admin. Code § 13.7\(4\).](#)

<sup>57</sup> [Cal. Rev. & Tax Code § 43804](#); [49 C.F.R. § 172.101.](#)

<sup>58</sup> [Cal. Code Regs. tit. 19 § 2701.](#)



		Caltrans	<a href="#">Cal. Veh. Code § 31301</a>	Reduced speed limit	Within section regarding transportation of flammable liquid through Caldecott Tunnel; flammable liquid not defined
			<a href="#">Cal. Veh. Code § 34020.5</a>	Regulation of the time tank vehicles may travel through a tunnel on state highways <sup>59</sup>	Legislative intent to reduce risk of hazards in the highway transportation of flammable and combustible liquids in tank vehicles; <sup>60</sup> flammable and combustible liquids not defined
		CHP <sup>61</sup>	<a href="#">Cal. Veh. Code § 2402.6</a>	Adoption and enforcement of regulations related to fuel containers	The Commissioner of the California Highway Patrol has the power to regulate fuel systems on vehicles using compressed or liquified hydrogen gas
			<a href="#">Cal. Veh. Code § 31301</a>	Transportation of hazardous materials prohibited through Caldecott Tunnel; reduced speed limit	Applies to flammable liquid; term not defined
			<a href="#">Cal. Veh. Code § 31303</a>	Highway transportation of hazardous materials	Compressed hydrogen included by reference to federal regulations within the definition of hazardous material <sup>62</sup>
			<a href="#">Cal. Veh. Code § 32000 et. seq.</a>	Inspection and licensing of motor carrier who directs the transportation of a hazardous material; authorization to adopt regulations	
			<a href="#">Cal. Veh. Code § 34019</a>	Regulation of cargo tanks and stability of tank vehicles	Legislative intent to reduce risk of hazards in the highway transportation of flammable and combustible liquids in tank vehicles; <sup>63</sup> flammable and combustible liquids not defined
			<a href="#">Cal. Veh. Code § 34060 and § 34064</a>	Inspection of cargo tanks	
			<a href="#">Cal. Veh. Code § 34060.5</a>	Pressure, vacuum, or hydrostatic testing of cargo tank	

<sup>59</sup> After consultation with CHP, OSFM, and affected local agencies.

<sup>60</sup> [Cal. Veh. Code § 34000](#).

<sup>61</sup> [Cal. Veh. Code § 2400\(a\)](#).

<sup>62</sup> [Cal. Veh. Code § 353](#) and [§ 2402.7](#); [49 C.F.R. § 172.101](#).

<sup>63</sup> [Cal. Veh. Code § 34000](#).

			<a href="#">Cal. Veh. Code § 34500.3</a>	Regulation of safe operations of vehicles transporting hazardous materials	Compressed hydrogen included by reference to federal regulations within the definition of hazardous material <sup>64</sup>
			<a href="#">Cal. Code Regs. tit. 13 § 1160 et seq.</a>	General hazardous materials regulations	Compressed hydrogen included by reference to federal regulations within the definition of hazardous material <sup>65</sup>
			<a href="#">Cal. Veh. Code § 34507.5</a>	Carrier identification number for motor carrier	Motor carrier includes vehicles transporting hazardous materials; <sup>66</sup> compressed hydrogen included by reference to federal regulations within the definition of hazardous material <sup>67</sup>
			<a href="#">Cal. Code Regs. tit. 13 § 1233</a>	Safety compliance ratings; inspections of motor carriers and hazardous materials shippers	Motor carrier includes vehicles transporting hazardous materials; <sup>68</sup> compressed hydrogen included by reference to federal regulations within the definition of hazardous material <sup>69</sup>
			<a href="#">Cal. Code Regs. tit. 13 § 1234</a>	Required records for motor carriers	
			<a href="#">Cal. Code Regs. tit. 13 § 1212</a> and <a href="#">§ 1212.5</a>	Driver hours of service	Different rules apply where driver is transporting hazardous materials, hazardous substances, or a flammable liquid; compressed hydrogen included by reference to federal regulations within the definition of hazardous material <sup>70</sup>

<sup>64</sup> [Cal. Veh. Code § 353](#) and [§ 2402.7](#); [49 C.F.R. § 172.101](#).

<sup>65</sup> [Cal. Code Regs. tit. 13 § 1160.3\(d\)](#); [49 C.F.R. § 172.101](#).

<sup>66</sup> [Cal. Veh. Code § 408](#) .

<sup>67</sup> [Cal. Veh. Code § 353](#) and [§ 2402.7](#); [49 C.F.R. § 172.101](#).

<sup>68</sup> [Cal. Veh. Code § 408](#).

<sup>69</sup> [Cal. Veh. Code § 353](#) and [§ 2402.7](#); [49 C.F.R. § 172.101](#).

<sup>70</sup> [Cal. Veh. Code § 353](#) and [§ 2402.7](#); [49 C.F.R. § 172.101](#).

		DMV	<a href="#">Cal. Rev. &amp; Tax Code § 7234</a> ; and <a href="#">Cal. Veh. Code § 34621</a>	Fee; application for motor carrier permit	Motor carrier includes vehicles transporting hazardous materials; <sup>71</sup> compressed hydrogen included by reference to federal regulations within the definition of hazardous material <sup>72</sup>
			<a href="#">Cal. Veh. Code § 34631.5</a>	Insurance: adequate protection against liability	Applies to motor carrier of property that transports any hazardous material; compressed hydrogen included by reference to federal regulations within the definition of hazardous material <sup>73</sup>
	Local	BLC	<a href="#">Los Angeles County Code § 7.14.010</a> and <a href="#">§ 7.28.040</a>	License and license fee for tank vehicles	Provisions refer for gasoline and oil tank trucks, but tank vehicle defined as vehicle which transports and delivers flammable gas; flammable gas not defined <sup>74</sup>
		DPW-County	<a href="#">Los Angeles County Code § 15.64.310(B)</a>	Parking restrictions on vehicles transporting hazardous materials	Compressed hydrogen included by reference to federal regulations within the definition of hazardous material <sup>75</sup>
		LAFD- County	<a href="#">Los Angeles County Code § 12.50.025</a> and <a href="#">§ 12.64.040</a>	Permits, plans and fees required by handlers of hazardous materials <sup>76</sup>	Hazardous material defined broadly to include any material that poses a hazard to human health and safety or the environment, but does not explicitly mention hydrogen <sup>77</sup>
			<a href="#">Los Angeles County Code tit. 32 § 105.6.16</a>	Operational permit required to operate tank vehicles where flammable and combustible liquids are transported, stored, or dispensed	Flammable and combustible liquids not defined

<sup>71</sup> [Cal. Veh. Code § 408](#).

<sup>72</sup> [Cal. Veh. Code § 353](#) and [§ 2402.7](#); [49 C.F.R. § 172.101](#).

<sup>73</sup> [Cal. Veh. Code § 353](#) and [§ 2402.7](#); [49 C.F.R. § 172.101](#).

<sup>74</sup> [Los Angeles County Code § 7.28.010](#).

<sup>75</sup> [49 C.F.R. § 172.101](#).

<sup>76</sup> Handle means use of a hazardous material by the connection of any tank vehicle, tank car, or container. [Los Angeles County Code § 12.64.010\(J\)](#).

<sup>77</sup> [Los Angeles County Code § 12.64.010\(L\)](#).

			<a href="#">Los Angeles County Code tit. 32 § 105.6.20</a>	Operational permit required to dispense, use, or handle hazardous materials over certain amounts	Flammable materials listed but not defined <sup>78</sup>
			<a href="#">Los Angeles County Code tit. 32 § 5001.5</a>	Unified program facility permit for hazardous materials handlers required prior to issuance of any fire code permit; permit required for tank vehicles to remain on a siding at the point of delivery while connected for transfer operations	Hazardous materials defined as chemicals or substances which are physical hazards or health hazards <sup>79</sup> ; hydrogen not explicitly mentioned
			<a href="#">Los Angeles County Code tit. 32 § 5706.5.4.6 and § 6104.5</a>	Time limit for tank vehicles; tank car and tank vehicle stations	Applies to bulk plants or terminals, defined as portions of properties where flammable and combustible liquids are received and stored, transferred, or blended in bulk for the purpose of distribution; <sup>80</sup> flammable and combustible liquids not defined
		LAFD-City	<a href="#">Los Angeles Municipal Code § 57.5003.15 et seq.</a>	Tank vehicles prohibited locations and transfer hoses	Apply when used for the transportation of liquefied flammable gasses or flammable gasses; terms not defined
			<a href="#">Los Angeles Municipal Code § 57.6112 et seq.</a>	Requirements for tank vehicles at Bulk Distribution Stations	Bulk distributing station defined as any distributing station where flammable or combustible liquids with a loading rack are received and stored in bulk for the purpose of distribution; <sup>81</sup> flammable or combustible liquids not defined

<sup>78</sup> [Los Angeles County Code tit. 32 Table 105.6.20.](#)

<sup>79</sup> [Los Angeles County Code tit. 32 §5002.1 and § 202.](#)

<sup>80</sup> [Los Angeles County Code tit. 32 § 5706.4 and § 5706.5.1.](#)

<sup>81</sup> [Los Angeles Municipal Code § 57.105.6.7.](#)

5. Transportation by Rail	State	BOE	<a href="#">Cal. Gov. Code § 8574.32 and § 8754.36</a>	Fee imposed on person owning hazardous material at the time it is transported by loaded rail car	Compressed hydrogen included by reference to federal regulations within the definition of hazardous material; <sup>82</sup> but hydrogen not listed as one of the 25 most hazardous material commodities in OES regulations <sup>83</sup>
			<a href="#">Cal. Gov. Code § 8574.34</a>	Registration by every person who operates a railroad that transports hazardous materials by rail car	
			<a href="#">Cal. Gov. Code § 8574.42</a>	Regulatory authority related to the administration and enforcement of Article 3.9 – Regional Railroad Accident Preparedness and Immediate Response	
		BOE, CalEPA	<a href="#">Cal. Pub. Util. Code § 7714.5</a> and <a href="#">Cal. Rev. &amp; Tax Code § 43087</a>	Fee paid by surface transporter of hazardous material; collected by BOE	Compressed hydrogen included by reference to federal regulations within the definition of hazardous material; <sup>84</sup> but hydrogen not listed as one of the 25 most hazardous material commodities in OES regulations <sup>85</sup>
		CPUC	<a href="#">Cal. Pub. Util. Code § 765.5</a>	State Participation Program for the regulation of rail transportation of hazardous materials as authorized by the Hazardous Material Transportation Uniform Safety Act	Compressed hydrogen is considered a hazardous material by the federal government <sup>86</sup>
		CPUC, OES	<a href="#">Cal. Pub. Util. Code § 7665.2</a> and <a href="#">§ 7665.6</a>	Risk assessment and duties of rail facilities	Requirements related to hazardous cargo; hazardous cargo not defined

<sup>82</sup> [Cal. Gov. Code § 8574.30\(d\)](#); [49 C.F.R. § 172.101](#).

<sup>83</sup> [Cal. Code Regs. tit. 19 § 2701](#).

<sup>84</sup> [Cal. Rev. & Tax Code § 43804](#); [49 C.F.R. § 172.101](#).

<sup>85</sup> [Cal. Code Regs. tit. 19 § 2701](#).

<sup>86</sup> [49 C.F.R. § 172.101](#).

			<a href="#">Cal. Pub. Util. Code § 7673</a>	Duties of railroad corporation transporting hazardous materials	Compressed hydrogen included by reference to federal regulations within the definition of hazardous material <sup>87</sup>
		OES	<a href="#">Cal. Health &amp; Saf. Code § 25547.6</a>	Rail carrier hazardous materials emergency response plan	Compressed hydrogen included by reference to federal regulations within the definition of hazardous material <sup>88</sup> ; but hydrogen not listed as one of the 25 most hazardous material commodities in OES regulations <sup>89</sup>
	Local	LAFD- County	<a href="#">Los Angeles County Code § 12.50.025</a> and <a href="#">§ 12.64.040</a>	Permits, plans and fees required by handlers of hazardous materials <sup>90</sup>	Hazardous material defined broadly to include any material that poses a hazard to human health and safety or the environment, but does not explicitly mention hydrogen <sup>91</sup>
			<a href="#">Los Angeles County Code tit. 32 § 105.6.20</a>	Operational permit required to dispense, use, or handle hazardous materials over certain amounts	Flammable materials listed but not defined <sup>92</sup>
			<a href="#">Los Angeles County Code tit. 32 § 5001.5</a>	Unified program facility permit for hazardous materials handlers required prior to issuance of any fire code permit; permit required for railroad tank cars to remain on a siding at the point of delivery while connected for transfer operations	Hazardous materials defined as chemicals or substances which are physical hazards or health hazards <sup>93</sup>

<sup>87</sup> [Cal. Pub. Util. Code § 7672\(a\)](#); [49 C.F.R. § 171.8](#); [49 C.F.R. § 172.101](#).

<sup>88</sup> [Cal. Health & Saf. Code § 25547\(b\)](#); [49 C.F.R. § 172.101](#).

<sup>89</sup> [Cal. Code Regs. tit. 19 § 2701](#).

<sup>90</sup> Handle means use of a hazardous material by the connection of any tank car or container. [Los Angeles County Code § 12.64.010\(J\)](#).

<sup>91</sup> [Los Angeles County Code § 12.64.010\(L\)](#).

<sup>92</sup> [Los Angeles County Code tit. 32 Table 105.6.20](#).

<sup>93</sup> [Los Angeles County Code tit. 32 § 5002.1](#) and [§ 202](#).



6. Transportation by Waterways			<a href="#">Los Angeles County Code tit. 32 § 5706.5.4.6 and § 6104.5</a>	Time limit for tank cars; tank car stations	Applies to bulk plants or terminals, defined as portions of properties where flammable and combustible liquids are received and stored, transferred, or blended in bulk for the purpose of distribution; <sup>94</sup> flammable and combustible liquids not defined
		LAFD-City	<a href="#">Los Angeles Municipal Code § 57.6112.2</a>	No railroad liquified flammable gas tank car shall be loaded or unleaded at any Bulk Distributing Station, unless it is completely within such fenced enclosure	Bulk distributing station defined as any distributing station where flammable or combustible liquids with a loading rack are received and stored in bulk for the purpose of distribution; <sup>95</sup> flammable or combustible liquids not defined
	State	DWR	<a href="#">Cal. Code Regs. tit. 23 § 612.64</a>	Hazardous materials crossing the open waters of the State Water Project	Hazardous material not defined
		OAG	<a href="#">Cal. Harb. And Nav. Code § 135</a>	Unlawful to cause or permit any hazardous substance to be transferred between a vessel and a shore facility or another vessel unless the flow is continuously monitored	Hazardous substance not defined
		SLC	<a href="#">Cal. Code Regs. tit. 2 § 2300 et seq.</a>	Marine terminals inspection and monitoring	Marine terminal defined as a facility used for transferring oil to or from tank vessels or barges <sup>96</sup>
	Local	LAFD- County	<a href="#">Los Angeles County Code § 12.50.025 and § 12.64.040</a>	Permits, plans and fees required by handlers of hazardous materials <sup>97</sup>	Hazardous material defined broadly to include any material that poses a hazard to human health and safety or the environment, but does not explicitly mention hydrogen <sup>98</sup>

<sup>94</sup> [Los Angeles County Code tit. 32 § 5706.4 and § 5706.5.1.](#)

<sup>95</sup> [Los Angeles Municipal Code § 57.105.6.7.](#)

<sup>96</sup> [Cal. Code of Regs. tit. 2 § 2315\(m\).](#)

<sup>97</sup> Handle means use of a hazardous material by the connection of any marine vessel. [Los Angeles County Code § 12.64.010\(J\).](#)

<sup>98</sup> [Los Angeles County Code § 12.64.010\(L\).](#)

			<a href="#">Los Angeles County Code tit. 32 § 105.6.20</a>	Operational permit required to dispense, use, or handle hazardous materials over certain amounts	Flammable materials listed but not defined <sup>99</sup>
		LAFD-City	<a href="#">Los Angeles Municipal Code § 57.105.6.23</a> and <a href="#">§ 57.106.6.3.2.</a>	Permit and fees required to engage in the business of a marine oil terminal	Marine oil terminal is intended to deliver or receive from oceangoing vessels liquified or gaseous hazardous materials or flammable or combustible liquids; terms not defined
			<a href="#">Los Angeles Municipal Code § 57.50003.13</a>	Hazardous materials falling within the scope of “Dangerous Cargo” as defined by Coast Guard regulations shall comply with Harbor and Fire Department regulations for their handling in the Los Angeles Harbor Area	Hydrogen gas and compressed hydrogen within the scope of Dangerous Cargo <sup>100</sup>
<b>7. Electricity Generation</b>	State	BSC	<a href="#">California Electrical Code § 692 et seq.</a>	Installation of fuel cell systems	Fuel cell system defined as the aggregate of equipment used to convert chemical fuel into usable electricity; hydrogen not explicitly mentioned <sup>101</sup>
		CARB	<a href="#">Cal. Pub. Util. Code § 2827.10(b)</a> and <a href="#">Cal. Code Regs. tit. 17 § 95408 et seq.</a>	Schedule of annual greenhouse gas emissions reduction standards for fuel cell electrical generation resource <sup>102</sup>	Applies to facility that electrochemically converts fuel to electricity; does not explicitly mention hydrogen fuel <sup>103</sup>
		CEC	<a href="#">Cal. Pub. Util. Code § 398.1, et seq.</a> and <a href="#">Cal. Code Regs. tit. 20 §1390 et seq.</a>	Power source disclosure by generators and retail suppliers	All fuel types reported, including those falling into “other” category, but hydrogen not explicitly listed

<sup>99</sup> [Los Angeles County Code tit. 32 Table 105.6.20.](#)

<sup>100</sup> [46 C.F.R. § 126.3](#); [49 C.F.R. § 172.101](#); [46 C.F.R. § 148.420.](#)

<sup>101</sup> [Cal. Electrical Code § 692.2.](#)

<sup>102</sup> In consultation with CEC.

<sup>103</sup> [Cal. Pub. Util. Code § 2827.10\(a\).](#)

			<a href="#">Cal. Pub. Res. Code § 25500 et seq.</a>	Certification of all sites and related facilities in the state (if CPUC has not issued a Certificate of Public Convenience and Necessity) <sup>104</sup>	Applies to thermal powerplants, defined as an electrical generating facility using any source of thermal energy, with a generating capacity of 50 megawatts or more, and any facilities appurtenant thereto; <sup>105</sup> hydrogen not explicitly mentioned
		CPUC	<a href="#">Cal. Pub. Util. Code § 701</a>	Public utility regulation	The term public utility is defined to include electrical corporations; <sup>106</sup> hydrogen not explicitly mentioned
			<a href="#">Cal. Pub. Util. Code § 1003 and 1003.5</a>	Certificates of Public Convenience and Necessity	Required to authorize new construction of any electric plant, line, or extension; hydrogen not explicitly mentioned
			<a href="#">Cal. Pub. Util. Code § 1091 et seq.</a>	Evaluation by construction project board of consultants	Required when application is made for certification of an electric plant, line, or extension; hydrogen not explicitly mentioned
			<a href="#">Cal. Pub. Util. Code § 2827.10(c) et seq.</a>	Net energy metering tariff for eligible fuel cell customer-generators	Applies to facility not more than five megawatts that electrochemically converts fuel to electricity; does not explicitly mention hydrogen fuel <sup>107</sup>
		DIR	<a href="#">Cal. Code Regs. tit. 8 § 2305.2</a>	Low-Voltage Electrical Safety Orders	Safety Orders <b>do not</b> apply to installations of conductors, equipment, and associated enclosures subject to the jurisdiction of the CPUC that are owned, operated and maintained by an electric, communication or electric railway utility
			<a href="#">Cal. Code Regs. tit. 8 § 2583.1 et seq.</a>	Low-Voltage Electrical Safety Orders relating to for electrolytic cells	<b>Do not</b> apply to cells used as a source of electric energy

<sup>104</sup> [Cal. Pub. Res. Code § 25501.](#)

<sup>105</sup> [Cal. Pub. Res. Code §§ 25110, 25119, and 25120.](#)

<sup>106</sup> [Cal. Pub. Util. Code § 216\(a\)\(1\).](#)

<sup>107</sup> [Cal. Pub. Util. Code § 2827.10\(a\).](#)

		OSFM	<a href="#">Cal. Fire Code § 1206 et seq.</a>	Permits and requirements for stationary fuel cell power systems	Stationary fuel cell power system defined as a stationary energy generation system that converts the chemical energy of a fuel and oxidant to electric energy by an electrochemical process; does not explicitly reference hydrogen as a fuel source <sup>108</sup>
	Local	DPR	<a href="#">Los Angeles County Code § 22.186 et seq.</a> and <a href="#">§ 22.226 et seq.</a>	Site plan review	Required for facilities to supply electricity in Heavy Industrial zones; <sup>109</sup> hydrogen not explicitly mentioned
		LAFD-County	<a href="#">Los Angeles County Code tit. 32 § 105.6.20</a>	Operational permit required to use or handle hazardous materials over certain amounts	Flammable materials listed but not defined <sup>110</sup>
		City Council <sup>111</sup>	<a href="#">Los Angeles Admin. Code § 13.1 et seq.</a>	Granting of franchises, permits and privileges	Applies to franchises, permits or privileges relating to plants for furnishing light, heat, and power; <sup>112</sup> hydrogen not explicitly mentioned
		LADBS	<a href="#">Los Angeles Municipal Code § 95.0206</a>	Plans and specifications for all wiring intended to be installed on a renewable energy system to be submitted and approved before a permit is issued	Fuel cell given as an example but not defined
			<a href="#">Los Angeles Municipal Code § 95.1600</a>	Adopts <a href="#">Chapter 16 of the California Mechanical Code</a>	Applies to stationary fuel cell power plants; term not defined
<b>8. Chemical &amp; Industrial Use</b>	State	CDFA	<a href="#">Cal. Food &amp; Agr. Code § 14502</a> and <a href="#">Cal. Code Regs. tit. 3 § 2300 et seq.</a>	Regulation of fertilizing materials	Fertilizing material defined broadly as any commercial fertilizer; <sup>113</sup> hydrogen not explicitly mentioned

<sup>108</sup> [Cal. Fire Code § 202.](#)

<sup>109</sup> [Los Angeles County Code § 22.22.030.](#)

<sup>110</sup> [Los Angeles County Code tit. 32 Table 105.6.20.](#)

<sup>111</sup> Regulation of public utilities by the City of Los Angeles may not conflict with any paramount regulation, rate fixing or extension requirements for any such utility or service by the State or nation. [Los Angeles Admin. Code § 13.1\(b\)](#). Every application made to the City Council for a franchise, permit or privilege shall first be referred to the City board, commission, office or department having jurisdiction over the matter for review and recommendation on the application. [Los Angeles Admin. Code § 13.12\(a\)](#).

<sup>112</sup> [Los Angeles Admin. Code § 13.7\(5\).](#)

<sup>113</sup> [Cal. Food & Agr. Code § 14533.](#)

		DIR	<a href="#">Cal. Code Regs. tit. 8 § 5465, et seq.</a>	Safety orders for delivery, storage, and discharge of hydrogen to consumer piping	Applies to gaseous and liquified hydrogen systems <sup>114</sup>
		OSFM	<a href="#">Cal. Fire Code § 5808</a>	Design and construction of hydrogen fuel gas rooms	Hydrogen fuel gas room defined as a space intended exclusively to house a gaseous hydrogen system <sup>115</sup>
	Local	DPR	<a href="#">Los Angeles County Code § 22.230 et seq.</a> and <a href="#">§ 22.150 et seq.</a>	Conditional use permit	Required for the manufacture of synthetic ammonia in Heavy Manufacturing and Heavy Industrial zones; <sup>116</sup> use of hydrogen not explicitly mentioned
		LAFD- County	<a href="#">Los Angeles County Code § 12.50.025</a> and <a href="#">§ 12.64.040</a>	Permits, plans and fees required by handlers of hazardous materials <sup>117</sup>	Hazardous material defined broadly to include any material that poses a hazard to human health and safety or the environment, but does not explicitly mention hydrogen <sup>118</sup>
			<a href="#">Los Angeles County Code tit. 32 § 105.6.16</a>	Operational permit required to operate equipment where flammable and combustible liquids are used	Flammable and combustible liquids not defined
			<a href="#">Los Angeles County Code tit. 32 § 105.6.20</a>	Operational permit required to use or handle hazardous materials over certain amounts	Flammable materials listed as hazardous materials but not defined <sup>119</sup>
		DCP	<a href="#">Los Angeles Municipal Code § 12.20(4), (9), and (36)(h)</a> and <a href="#">§ 12.24.1</a>	Land use and zoning	References ammonia, chemical manufacture, and fertilizer manufacture as a land use allowed in heavy industrial zones; use of hydrogen not explicitly mentioned

<sup>114</sup> Both terms defined in [Cal. Code Regs. tit. 8 § 5415](#).

<sup>115</sup> [Cal. Fire Code § 202](#).

<sup>116</sup> [Los Angeles County Code § 22.22.030](#).

<sup>117</sup> Handle means to use, process, or store a hazardous material in any fashion. [Los Angeles County Code § 12.64.010\(J\)](#).

<sup>118</sup> [Los Angeles County Code § 12.64.010\(L\)](#).

<sup>119</sup> [Los Angeles County Code tit. 32 Table 105.6.20](#).

		LAFD-City	<a href="#">Los Angeles Municipal Code § 57.105.3.9.1.2.1</a>	Permit to store, process or use hazardous materials above ground	Applies to flammable gases and liquified flammable gases over certain quantities; <sup>120</sup> flammable gases and liquified flammable gases not defined
			<a href="#">Los Angeles Municipal Code § 57.105.6.15</a>	Operational permit required to utilize a site for the dispensing of liquid fuels from fuel tanks into the fuel tanks of special equipment at commercial, industrial, governmental or manufacturing establishments	Hydrogen fuel not explicitly mentioned
9. Use in Consumer/Commercial Vehicles	State	CARB	<a href="#">Cal. Veh. Code § 27156(h); Cal. Health &amp; Saf. Code § 43006; and Cal. Code Regs. tit. 13 § 2032</a>	Certification of alternative fuel retrofit systems	CARB appears to have the power to do so, but does not seem to have certified any fuel cell retrofit systems <sup>121</sup>
			<a href="#">Cal. Health &amp; Saf. Code § 43018.9</a>	Application of Clean Transportation Program to hydrogen	Provides that CARB shall have <b>no authority</b> to enforce any element of regulations that require suppliers to construct, operate, or provide funding for the construction or operation of any publicly available hydrogen-fueling station
			<a href="#">Cal. Health &amp; Saf. Code § 43869</a>	Regulation of fueling stations that receive state funds	Requires regulation of hydrogen fuel from well-to-wheel
			<a href="#">Cal. Code Regs. tit. 17 § 95482(a)(6)</a>	Low Carbon Fuel Standards	Hydrogen is listed as a fuel subject to the regulation
		CHP	<a href="#">Cal. Veh. Code § 2402.6</a>	Adoption and enforcement of regulations related to fuel systems	The Commissioner of the California Highway Patrol has the power to regulate fuel systems on vehicles using compressed or liquified hydrogen gas or liquid fuels that generate hydrogen gas

<sup>120</sup> [Los Angeles Municipal Code § 57.105.6.17.](#)

<sup>121</sup> See *Approved Alternative Fuel Conversion Systems*, Reference No. A-93-551, California Air Resources Board (Oct. 7, 1993), [https://ww3.arb.ca.gov/msprog/aftermkt/altfuel/altfuelsys93\\_022607.pdf](https://ww3.arb.ca.gov/msprog/aftermkt/altfuel/altfuelsys93_022607.pdf) and *Alternative Fuel Retrofit Systems Certified by the Air Resources Board* (last updated June 1, 2022), <https://ww3.arb.ca.gov/msprog/aftermkt/altfuel/altfuelsys04.pdf>.



		CPUC	<a href="#">Cal. Pub. Util. Code §216(f)</a>	Public utility regulation	Provides that the ownership of a facility that sells hydrogen at retail to the public for use only as a motor vehicle fuel and the sale of such hydrogen at retail <b>does not</b> make the corporation or person a public utility solely because of that ownership, operation, or sale
		OSFM	<a href="#">Cal. Fire Code § 2301 et seq.</a>	Regulations for motor fuel-dispensing stations	Applies to automotive motor-fuel dispensing facility, defined as property where flammable liquids or gases used as motor fuels are stored and dispensed from fixed equipment into the fuel tanks of motor vehicles; also applies to fleet vehicle motor fuel-dispensing facility, defined as that portion of a commercial, industrial, governmental or manufacturing property where liquids used as fuels are stored and dispensed into the fuel tanks of motor vehicles that are used in connection with such business; <sup>122</sup> also explicitly mentions hydrogen motor fuel-dispensing and generation facilities <sup>123</sup>
			<a href="#">Cal. Fire Code § 5809 et seq.</a>	Requirements for mobile fueling of gaseous hydrogen into the fuel tanks of hydrogen-fueled vehicles; mobile fueling of liquid hydrogen prohibited	Explicitly mentions hydrogen
		CDFA	<a href="#">Cal. Code Regs. Tit. 4, § 4180-81</a>	Requirements for hydrogen used in internal combustion engines and fuel cells	Explicitly mentions hydrogen

<sup>122</sup> [Cal. Fire Code § 202.](#)

<sup>123</sup> [Cal. Fire Code § 2309 et seq.](#)

		CA Legislature	<a href="#">Cal. Gov. Code § 65850.7</a>	Requires local governments/ agencies to approve all applications to install hydrogen-fueling stations that meet federal/ state/local health and safety requirements <sup>124</sup>	Explicitly mentions hydrogen-fueling stations
	Local	SCAQMD	<a href="#">Cal. Health &amp; Saf. Code § 40516</a>	Expedited permit review and project assistance mechanisms for projects directly related to clean fuel vehicle technologies	Hydrogen is considered a clean fuel for purposes of the Section
		BLC	<a href="#">Los Angeles County Code § 7.14.010</a> and <a href="#">§ 7.60.120</a>	License and license fee for filling stations	Apply to persons engaged in the business of selling or distributing cryogenics or other flammable vaporous gas from a filling station, tank truck or trailer, or stationary tank; hydrogen not explicitly mentioned
		LAFD- County	<a href="#">Los Angeles County Code § 12.50.025</a> and <a href="#">§ 12.64.040</a>	Permits, plans and fees required by handlers of hazardous materials <sup>124</sup>	Hazardous material defined broadly to include any material that poses a hazard to human health and safety or the environment, but does not explicitly mention hydrogen <sup>125</sup>
			<a href="#">Los Angeles County Code tit. 32 § 105.6.16</a>	Operational permit required to operate equipment, including fuel-dispensing stations, where flammable and combustible liquids are stored, dispensed, or sued	Flammable and combustible liquids not defined
		DCP	<a href="#">Los Angeles Municipal Code § 12.14(6)</a> and <a href="#">§ 12.24(W)(2)</a>	Zoning requirements for automotive fueling and service stations	Automotive fueling and service station defined as a business which dispenses automotive fuel to the public; hydrogen not explicitly mentioned <sup>126</sup>

<sup>124</sup> Handle means to use a hazardous material in any fashion, including use in connection with any tank vehicle or tank car. [Los Angeles County Code § 12.64.010\(J\)](#).

<sup>125</sup> [Los Angeles County Code § 12.64.010\(L\)](#).

<sup>126</sup> [Los Angeles Municipal Code § 12.03](#).

		LAFD-City	<a href="#">Los Angeles Municipal Code § 57.105.6.15</a>	Operational permit required to utilize a site for the dispensing of liquid fuels from fuel tanks into the fuel tanks of motor vehicles	Hydrogen fuel not explicitly mentioned
			<a href="#">Los Angeles Municipal Code § 57.105.6.16</a>	Operational permit required to engage in the dispensing of liquid fuels into the fuel tanks for motor vehicles at commercial, industrial, governmental or manufacturing establishments	Hydrogen fuel not explicitly mentioned
		RAP	<a href="#">Los Angeles Charter § 596(4)</a>	Lease for construction and operation of a public parking structure under any public park	Prohibition on retail sale of gasoline, oil and accessories to private vehicles
<b>10. Use in Rail</b>	State	CARB	<a href="#">Cal. Code Regs. tit. 13 § 2299(a)(2)</a> and <a href="#">Cal. Code Regs. tit. 17 § 93117(a)(2)</a>	Standards for nonvehicular diesel fuel used in intrastate diesel-electric locomotives	Applies to fuel that is commonly or commercially known, sold or represented as diesel fuel <sup>127</sup>
			<a href="#">Cal. Code Regs. tit. 13 § 2299(c)</a> and <a href="#">Cal. Code Regs. tit. 17 § 93117(c)</a>	Alternative emission reduction plan for intrastate diesel-electric locomotives	Contemplates plan containing substitute fuel; hydrogen not explicitly mentioned
			<a href="#">Cal. Code Regs. tit. 13 § 2700 et seq.</a>	Verification of in-use strategies to control emissions from diesel engines	Alternative diesel fuel defined as fuel that does not require engine or fuel system modifications for the engine to operate <sup>128</sup>
		CPUC	<a href="#">Cal. Pub. Util. Code § 7528</a>	Railroad operators authorized to use any suitable motive power	Hydrogen not explicitly mentioned
	Local	LAFD- County	<a href="#">Los Angeles County Code § 12.50.025</a> and <a href="#">§ 12.64.040</a>	Permits, plans and fees required by handlers of hazardous materials <sup>129</sup>	Hazardous material defined broadly to include any material that poses a hazard to human health and safety or the environment, but does not explicitly mention hydrogen <sup>130</sup>

<sup>127</sup> [Cal. Code Regs. tit. 13 § 2299\(b\)\(3\)](#).

<sup>128</sup> [Cal. Code Regs. tit. 13 § 2701\(a\)\(3\)](#).

<sup>129</sup> Handle means to use a hazardous material in any fashion. [Los Angeles County Code of § 12.64.010\(U\)](#).

<sup>130</sup> [Los Angeles County Code § 12.64.010\(L\)](#).

11. Use in Maritime	State	CARB	<a href="#">Cal. Code Regs. tit. 13 § 2299(a)(1)</a> and <a href="#">Cal. Code Regs. tit. 17 § 93117(a)(1)</a>	Standards for nonvehicular diesel fuel used in harborcraft in the SCAQMD	Applies to fuel that is commonly or commercially known, sold or represented as diesel fuel; harborcraft defined as marine vessel propelled by a diesel engine <sup>131</sup>
			<a href="#">Cal. Code Regs. tit. 13 § 2299.2</a>	Required use of low sulfur marine distillate fuels on ocean-going vessels	<b>Do not</b> apply to engines and boilers operating on alternative fuel, <sup>132</sup> defined to include hydrogen <sup>133</sup>
			<a href="#">Cal. Code Regs. tit. 13 § 2299.5</a> and <a href="#">Cal. Code Regs. tit. 17 § 93118.5</a>	Airborne toxic control measures for commercial harbor craft	Strategies may include the use of alternative fuel, defined to include hydrogen <sup>134</sup>
		OSFM	<a href="#">Cal. Fire Code § 2301 et seq.</a>	Regulations for motor fuel-dispensing stations	Applies to marine motor fuel-dispensing facilities, <sup>135</sup> defined as property where flammable liquids or gases used as fuel for watercraft are stored and dispensed into the fuel tanks of watercraft; <sup>136</sup> also explicitly mentions hydrogen motor fuel-dispensing and generation facilities <sup>137</sup>
		SLC	<a href="#">Cal. Code Regs. tit. 2 § 2300 et seq.</a>	Marine terminals inspection and monitoring	Marine terminal defined as a facility used for transferring oil to tank vessels or barges; oil defined as petroleum, liquid hydrocarbons, or petroleum products <sup>138</sup>
	Local	DPR	<a href="#">Los Angeles County Code § 22.230 et seq.</a> and <a href="#">§ 22.150 et seq.</a>	Conditional use permit	Required for marine oil service stations Heavy Industrial zones; <sup>139</sup> marine oil service stations not defined
			<a href="#">Los Angeles County Code § 22.186 et seq.</a> and <a href="#">§ 22.226 et seq.</a>	Site plan review	Required for marine oil service stations Light Manufacturing, Restricted Heavy Manufacturing, and Heavy Manufacturing zones; <sup>140</sup> marine oil service stations not defined

<sup>131</sup> [Cal. Code Regs. tit. 13 § 2299\(b\)\(3\)-\(b\)\(4\).](#)

<sup>132</sup> [Cal. Code Regs. tit. 13 § 2299.2\(c\)\(4\).](#)

<sup>133</sup> [Cal. Code Regs. tit. 13 § 2299.2\(d\)\(1\).](#)

<sup>134</sup> [Cal. Code Regs. tit. 17 § 93118.5\(d\)\(3\).](#)

<sup>135</sup> [Cal. Fire Code § 2310 et seq.](#)

<sup>136</sup> [Cal. Fire Code § 202.](#)

<sup>137</sup> [Cal. Fire Code § 2309 et seq.](#)

<sup>138</sup> [Cal. Code Regs. § 2315.](#)

<sup>139</sup> [Los Angeles County Code § 22.22.030.](#)

<sup>140</sup> [Los Angeles County Code § 22.22.030.](#)

			<a href="#">Los Angeles County Code § 22.316.080(C)(4)(b)(iii) and § 22.324.070(C)(f)</a>	Marine oil service stations prohibited in certain areas	Marine oil service stations not defined
		LAFD- County	<a href="#">Los Angeles County Code § 12.50.025 and § 12.64.040</a>	Permits, plans and fees required by handlers of hazardous materials <sup>141</sup>	Hazardous material defined broadly to include any material that poses a hazard to human health and safety or the environment, but does not explicitly mention hydrogen <sup>142</sup>
		LAFD-City	<a href="#">Los Angeles Municipal Code § 57.105.6.15 and § 57.106.6.3.2.</a>	Operational permit and fees required to utilize a site for the dispensing of liquid fuels from fuel tanks into the fuel tanks of marine craft	Hydrogen fuel not explicitly mentioned
			<a href="#">Los Angeles Municipal Code § 57.105.6.23 and § 57.106.6.3.2.</a>	Operational permit and fees required to engage in the business of a marine oil terminal	Marine oil terminal defined as any plant, station, premises, or equipment located on the harbor or ocean front, which is designed and intended to deliver to oceangoing vessels liquified or gaseous hazardous materials or flammable liquids; terms not defined
			<a href="#">Los Angeles Municipal Code § 57.105.6.24</a>	Operational permit required to engage in the business of a marine service station	Marine service station defined as any station, plant, premises or equipment where flammable liquids used as motor fuels are dispensed from equipment, on shore, piers or wharves to floating craft for fuel, except bunkering facilities for oceangoing vessels; terms not defined
<b>12. Use in Aviation</b>	State	CDTFA	<a href="#">Cal. Rev. &amp; Tax. Code § 7395</a>	Aircraft jet fuel dealer permit	Aircraft jet fuel defined as any inflammable liquid which is used or sold for use in propelling aircraft operated by the jet or turbine type of engine; hydrogen not explicitly mentioned <sup>143</sup>

<sup>141</sup> Handle means to use a hazardous material in any fashion, including use in connection with any marine vessel. [Los Angeles County Code § 12.64.010\(J\)](#).

<sup>142</sup> [Los Angeles County Code § 12.64.010\(L\)](#).

<sup>143</sup> [Cal. Rev. & Tax. Code § 7385](#).

		OSFM	<a href="#">Cal. Fire Code § 2301 et seq.</a>	Regulations for motor fuel-dispensing stations	Applies to aircraft motor-vehicle fuel-dispensing facilities, defined as property where flammable liquids or gases used as motor fuels are stored and dispensed into the fuel tanks of aircraft; <sup>144</sup> also explicitly mentions hydrogen motor fuel-dispensing and generation facilities <sup>145</sup>
	Local	LA County	<a href="#">Los Angeles County Code § 19.04.870</a>	LA County shall be the distributor for fuel and oil products on all airports	Fuel not defined
		LAFD- County	<a href="#">Los Angeles County Code § 12.50.025</a> and <a href="#">§ 12.64.040</a>	Permits, plans and fees required by handlers of hazardous materials <sup>146</sup>	Hazardous material defined broadly to include any material that poses a hazard to human health and safety or the environment, but does not explicitly mention hydrogen <sup>147</sup>
		LAFD-City	<a href="#">Los Angeles Municipal Code § 57.105.6.1</a> , <a href="#">§ 57.106.6.3.2</a> and <a href="#">§ 57.2001.3.1</a>	Permit and fees required to engage in the business of aircraft fueling station	Aircraft fueling station is defined as a premise which handles the transfer of flammable liquids or liquified flammable gas into or from an aircraft or fueler; hydrogen not explicitly mentioned
			<a href="#">Los Angeles Municipal Code § 57.105.6.2</a> and <a href="#">§ 57.106.6.3.2</a>	Operational permit and fees required to engage in the business of an aircraft refueler	Aircraft refueler defined as any cargo tank vehicle used for the transportation and transferring of flammable liquids or liquified flammable gas to fuel tanks or compartments of aircraft; hydrogen not explicitly mentioned
			<a href="#">Los Angeles Municipal Code § 57.105.6.3</a> and <a href="#">§ 57.106.6.3.2</a>	Operational permit and fees required to engaged in the business of operating an airport fueling system	Applies to system installed at an airport designed to service aircraft at fixed positions; hydrogen not explicitly mentioned

<sup>144</sup> [Cal. Fire Code § 202.](#)

<sup>145</sup> [Cal. Fire Code § 2309 et seq.](#)

<sup>146</sup> Handle means to use a hazardous material in any fashion. [Los Angeles County Code § 12.64.010\(J\).](#)

<sup>147</sup> [Los Angeles County Code § 12.64.010\(L\).](#)

## Additional Resources

### General

Hydrogen Fuel Cell Codes & Standards, Hydrogen Tools, <https://h2tools.org/codes-standards>.

Hydrogen Scaling Up: A sustainable pathway for the global energy transition, Hydrogen Council (Nov. 2017), [https://hydrogencouncil.com/wp-content/uploads/2017/11/Hydrogen-Scaling-up\\_Hydrogen-Council\\_2017.compressed.pdf](https://hydrogencouncil.com/wp-content/uploads/2017/11/Hydrogen-Scaling-up_Hydrogen-Council_2017.compressed.pdf).

### Production

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### Use in Consumer/ Commercial Vehicles

2021 Annual Evaluation of Fuel Cell Electric Vehicle Deployment and Hydrogen Fuel Station Network Development, California Air Resources Board (Sept. 2021), [https://ww2.arb.ca.gov/sites/default/files/2021-09/2021\\_AB-8\\_FINAL.pdf](https://ww2.arb.ca.gov/sites/default/files/2021-09/2021_AB-8_FINAL.pdf).

California Zero-Emission Vehicle Market Development Strategy, California Governor's Office of Business and Economic Development (Feb. 2021), [https://static.business.ca.gov/wp-content/uploads/2021/02/ZEV\\_Strategy\\_Feb2021.pdf](https://static.business.ca.gov/wp-content/uploads/2021/02/ZEV_Strategy_Feb2021.pdf).

Hydrogen Laws and Incentives in California, U.S. Department of Energy: Alternative Fuels Data Center, <https://afdc.energy.gov/fuels/laws/HY?state=ca>.

Hydrogen Station Permitting Guidebook, California Governor's Office of Business and Economic Development (Sept. 2020), [https://static.business.ca.gov/wp-content/uploads/2019/12/GO-Biz\\_Hydrogen-Station-Permitting-Guidebook\\_Sept-2020.pdf](https://static.business.ca.gov/wp-content/uploads/2019/12/GO-Biz_Hydrogen-Station-Permitting-Guidebook_Sept-2020.pdf).

Joint Agency Staff Report on Assembly Bill 8: 2021 Annual Assessment of Time and Cost Needed to Attain 100 Hydrogen Refueling Stations in California, California Energy Commission and California Air Resources Board (Dec. 2021), <https://www.energy.ca.gov/sites/default/files/2021-12/CEC-600-2021-040.pdf>.

### Use in Rail

California Air Resources Board, *Petition for Rulemaking Seeking the Amendment of the Locomotive Emission Standards for Newly Built Locomotives and Locomotive Engines and Lower Emission Standards for Remanufactured Locomotives and Locomotive Engines* (Apr. 2017), [https://ww2.arb.ca.gov/sites/default/files/2020-07/final\\_locomotive\\_petition\\_and\\_cover\\_letter\\_4\\_3\\_17.pdf](https://ww2.arb.ca.gov/sites/default/files/2020-07/final_locomotive_petition_and_cover_letter_4_3_17.pdf).

California State Rail Plan: Chapter 5-Freight Rail Investment Strategy, Caltrans (2018), <https://dot.ca.gov/programs/rail-and-mass-transportation/california-state-rail-plan>.

Technology Assessment: Freight Locomotives, California Air Resources Board (Nov. 2016), [https://ww2.arb.ca.gov/sites/default/files/2020-06/final\\_rail\\_tech\\_assessment\\_11282016%20-%20ADA%2020200117.pdf](https://ww2.arb.ca.gov/sites/default/files/2020-06/final_rail_tech_assessment_11282016%20-%20ADA%2020200117.pdf).