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**A Comparison of
Section 1401 of HR 8632,
the Ocean-Based Climate Solutions Act of 2020,
to the LPDD Model Law
Establishing Shipping Emissions Reporting and Efficiency Rankings
By
Mary T. Capdeville**

A bill, entitled “The Ocean-Based Climate Solutions Act of 2020,” was introduced in the House of Representatives on October 20, 2020.¹ This bill, HR 8632, contains many significant and welcomed provisions.²

Section 1401 of HR 8632 requires “monitoring, reporting, and verification requirements” of ships’ carbon dioxide (CO₂) emissions.³ Monitoring, reporting, and verification (MRV) requirements of ships’ CO₂ emissions is also the subject of the Legal Pathways to Deep Decarbonization (LPDD) model law, “LPDD Model Law Establishing Shipping Emissions Reporting and Efficiency Rankings.”⁴

¹ H.R.8632 - To direct the Secretary of Commerce, acting through the Administrator of the National Oceanic and Atmospheric Administration, to provide for ocean-based climate solutions to reduce carbon emissions and global warming; to make coastal communities more resilient; and to provide for the conservation and restoration of ocean and coastal habitats, biodiversity, and marine mammal and fish populations; and for other purposes. <<https://www.congress.gov/bill/116th-congress/house-bill/8632?q=%7B%22search%22%3A%5B%22congressId%3A116+AND+billStatus%3A%5C%22Introduced%5C%22%22%5D%7D&r=19&s=1>>

² See, e.g., The Environmental Defense Fund, *EDF Lauds Introduction of Important Ocean Climate Bill* <<https://www.edf.org/media/edf-lauds-introduction-important-ocean-climate-bill>> the Ocean Conservancy, *Celebrating the First Comprehensive Bill on Ocean-Climate Action: Bringing Ocean Solutions to the Fight Against Climate Change* <<https://oceanconservancy.org/climate/publications/celebrating-first-comprehensive-bill-ocean-climate-action/>> and the Natural Resources Defense Council, *Grijalva Bill Makes the Ocean Part of the Climate Solution* <<https://www.nrdc.org/experts/valerie-cleland/grijalva-bill-makes-ocean-part-climate-solution>>

³ HR 8632 §1401(a). Title XIV of the Act is entitled, “Measures to Address Greenhouse Gas Pollution from Shipping Vessels.” The Title contains two sections. Section 1401, “Greenhouse Gas Emissions from Shipping” and Section 1402, “Quiet Seas and Clear Skies Vessel Speed Reduction Award Program.” Section 1402 sets up a voluntary program for shipping companies to employ operations directed towards the protection of marine animals and reduction of greenhouse gas emissions and other air pollution.

⁴ Model Laws for Deep Decarbonization in the United States, *LPDD Model Law Establishing Shipping Emissions Reporting and Efficiency Rankings* <<https://lpdd.org/new-lpdd-model-law-establishing-shiping-emissions-reporting-and-efficiency-rankings/>> Included are the LPDD model law as a bill, an annotated version of the model law placed in the Act to Prevent Pollution from Ships (APPS), and a supporting memorandum of the model law.

Section 1401 is part of the much larger bill that pertains to climate change and oceans.⁵ In contrast, the LPDD model law deals exclusively with MRV requirements for ships.⁶ This memorandum compares components of §1401 to the LPDD model law.

Commonalities. Both §1401 and the LPDD model law apply to vessels of 5,000 gross tons and above.⁷ Both are applicable to, for example, “all vessels ... calling at, leaving, or transiting between, or at berth at, ports in the United States, regardless of flag.”⁸ Both set forth monitoring and reporting on CO₂ and transport work,⁹ both apply to both foreign and domestic ships,¹⁰ and both require reporting,¹¹ on an annual basis.¹²

Monitoring components. Both §1401 and the LPDD model law include monitoring of CO₂ emissions and related transport work, and average CO₂ emissions per distance.¹³ However, the LPDD model law sets forth additional monitoring and reporting components, which provide further pertinent information, such as the ship type, the Energy Efficiency Design Index (EEDI),¹⁴ and the identity of the ship.¹⁵ In addition, the LPDD model law also allows for other emitted substances to be included, by way of identifying CO₂ as a minimum requirement.¹⁶ This is an important addition with regards to additional greenhouse gas emissions or other related emissions. For example, methane emissions from ships are increasingly a concern due to broadened use by the shipping industry of liquefied natural gas as fuel.¹⁷ The most recent draft of the European Union regulation would require monitoring methods for methane to be established by the end of 2021.¹⁸ The latest European Union MRV draft revision would also require

⁵ The bill includes fifteen titles, including Marine and Coastal Blue Carbon; Offshore Energy; Climate-Ready Fisheries, Efficient Fishery Vessels, and Buy American Seafood; Coastal Resiliency and Adaptation; and Wetlands. The bill as introduced totals 324 pages.

⁶ See LPDD memorandum § 4.3 (“Lastly, U.S. MRV legislation does not raise to the level of its own act since the model legislation does not regulate emission levels, but is solely requiring information, and is focused on CO₂.”)

⁷ HR 8632 §1401(a); LPDD §1902(a)(6)(B). The LPDD model law references the International Convention for the Prevention of Pollution from Ships (MARPOL) Annex VI Regulation 22A, which applies to 5,000 gross tons and above. MARPOL Annex VI Regulation 22A.1.

⁸ HR 8632 §1401(a). However, whereas §1401(a) includes both “calling at” and “leaving,” ports, the model LPDD law uses APPS language, as in 33 USC 1903(c)(4)(C)(ii), and refers solely to “calls at,” when referring to U.S. ships. LPDD §1902(a)(6). This subsection of the model LPDD law may need to be revisited if this language would limit applicability of certain U.S. ships.

⁹ HR 8632 §1401(b)(2), LPDD §1903(c)(6)(A)(i)(II), §1903(c)(6)(A)(ii). However, the model law does not use the term “transport work” (which is distance multiplied by cargo quantity) as does §1401. See LPDD memorandum §3.1.4.1 at note 81, and LPDD model law annotated, note 23.

¹⁰ HR 8632 §1401(a), LPDD §1902(a)(6)(C).

¹¹ HR 8632 §1401(b), LPDD §1902(a)(6)(C). Section 1401 specifies reporting to NOAA and the ship’s flag State. The model law does not specify who receives the information.

¹² HR 8632 §1401(b), LPDD §1903(c)(6)(A)(ii).

¹³ HR 8632 §1401(b), LPDD §1903(c)(6)(A)(i).

¹⁴ See LPDD memorandum §3.1.3.1 regarding EEDI.

¹⁵ LPDD §1903(c)(6)(A)(i)(I) incorporates most of the IMO DCS elements, including distance. The European Union 2019 Annual Report on CO₂ Emissions from Maritime Transport includes discussions of these additional components. See LPDD memorandum §3.1.4.2.

¹⁶ Section 1903(c)(6)(A)(i)(II). See LPDD memorandum §4.2.

¹⁷ See, e.g., International Council on Clean Transportation, *The Climate Implications of using LNG as a Marine Fuel* (Jan 2020) <<https://theicct.org/publications/climate-impacts-LNG-marine-fuel-2020>>

¹⁸ European Parliament, Legislative Observatory, 2019/0017(COD): *Carbon dioxide emissions from maritime transport: global data collection system for ship fuel oil consumption data* (European Parliament Legislative

assessment of monitoring and reporting of other greenhouse gas emissions.¹⁹ Lastly, §1901 does not explicitly set forth a requirement for MRV regulations.²⁰

Annual report. Like the European Union MRV regulation,²¹ and the International Maritime Organization (IMO) regulation,²² §1401 requires an annual report.²³ And like the European Union MRV regulation,²⁴ it is to “facilitate public understanding...”²⁵ Such a requirement could also be added to the LPDD model law.

Energy efficiency. Section 1401 requires publication of an annual report pertaining to reported CO₂ emissions. The subject of the annual report §1401 is “vessel shipping sector’s CO₂ emissions and energy efficiency.” In at least two provisions elsewhere in the introduced bill, funding would be allocated to increase fuel efficiency and reduce fuel usage.²⁶ Together with these provisions, §1401 could lead towards energy efficiency. In contrast, the LPDD model law would achieve energy efficiency through implementation of its components, similar to the European Union program.²⁷

Responsible agency. The HR bill is directed to “the Secretary of Commerce, acting through the Administrator of the National Oceanic and Atmospheric Administration.”²⁸ Correspondingly, §1401 authorities reside with the NOAA Administrator and the Commerce Secretary.

Observatory)

<[https://oeil.secure.europarl.europa.eu/oeil/popups/ficheprocedure.do?reference=2019/0017\(COD\)&l=en](https://oeil.secure.europarl.europa.eu/oeil/popups/ficheprocedure.do?reference=2019/0017(COD)&l=en)>
European Parliament, Global data collection system for ship fuel oil consumption data, Amendments adopted by the European Parliament on 16 September 2020 on the proposal for a regulation of the European Parliament and of the Council amending Regulation (EU) 2015/757 in order to take appropriate account of the global data collection system for ship fuel oil consumption data (COM(2019)0038 – C8-0043/2019 – 2019/0017(COD)), P9_TA(2020)0219, Amendment 41 (“2a. By 31 December 2021, the Commission shall adopt delegated acts in accordance with Article 23, in order to supplement this Regulation by specifying the methods for determining methane (CH₄) emissions.”) <https://www.europarl.europa.eu/doceo/document/TA-9-2020-0219_EN.pdf> See also LPDD memorandum §3.1.4.3.

¹⁹ Id.

²⁰ The language that Commerce (NOAA) “shall develop a list” for “measuring, monitoring, and reporting metrics” could be read as not raising to the level of regulation promulgation, but rather of NOAA providing guidance. §1401(c)(1).

²¹ See LPDD memorandum §3.1.4.2.

²² See LPDD memorandum §3.1.3.1 at note 65.

²³ HR 8632 §1401(d). Section 1401(e) states that “Before promulgation of regulations under this section, reports issued under this section shall be reviewed to ensure that regulatory changes will not create the risk of increased CO₂ emissions.” It is unclear how reports would be issued under the section prior to the regulations. In addition, it is unclear how monitoring and reporting requirements would create a possibility of increased CO₂ emissions, unless energy used in the transfer of information are considered.

²⁴ See LPDD memorandum §3.1.4.2.

²⁵ HR 8632 §1401(d).

²⁶ See e.g., HR 8632 §404 (fishing vessels) and §318(a)(maritime transportation sector), as part of an amendment to the Energy Independence and Security Act of 2007, as §633(b)(1)(A).

²⁷ See LPDD memorandum §4.3 at note 204.

²⁸ The bill’s stated purpose is, “To direct the Secretary of Commerce, acting through the Administrator of the National Oceanic and Atmospheric Administration, to provide for ocean-based climate solutions to reduce carbon emissions and global warming; to make coastal communities more resilient; and to provide for the conservation and restoration of ocean and coastal habitats, bio- diversity, and marine mammal and fish populations; and for other purposes.”

Under the LPDD model law, however, the authorities reside with the U.S. Environmental Protection Agency²⁹ and the Coast Guard.³⁰ As discussed in the LPDD memorandum, the Coast Guard and EPA would have complementary expertise in promulgating and implementing an MRV program for ships. The two agencies have a continuing relationship in this area,³¹ through the implementation of the Act to Prevent Pollution from Ships (APPS).³² In addition, EPA promulgates and implements greenhouse gas regulations, maintains two public databases containing U.S. greenhouse gas emissions data, and is the agency that compiles the greenhouse gas inventory for submittal to the UNFCCC Secretariat.³³

With proper coordination between NOAA, the Coast Guard, and EPA, the statutory authority for the MRV could reside with NOAA. However, the existing expertise in this area presently resides with EPA and the Coast Guard.

Monitoring area. Along with providing legal authorities to NOAA, §1401 also seems to limit the area required for CO₂ monitoring,³⁴ in this case to solely within the U.S. exclusive economic zone (EEZ).³⁵

The coupling of NOAA and the EEZ correlates with U.S. fisheries policy, where NOAA has an extensive role.³⁶ The United States claims “sovereign rights and exclusive fishery management authority over all fish ... within the exclusive economic zone.”³⁷ NOAA has promulgated the regulations,³⁸ and NOAA and the U.S. Coast Guard share enforcement responsibilities with regards to these fisheries.³⁹ However, this EEZ limitation does not exist in either the IMO or European Union regulations, and represents the most dramatic divergence from the LPDD model law.

²⁹ See LPDD memorandum § 3.2.1.

³⁰ *Id.*

³¹ See LPDD memorandum § 4.3.

³² The Act to Prevent Pollution from Ships, 33 USC §§ 1901-1913. See LPDD memorandum §3.2.1.

³³ In the acknowledgements to the U.S. greenhouse gas inventory, certain NOAA individuals are recognized for inventory compilation efforts pertaining to aquaculture in coastal wetlands. Environmental Protection Agency, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2018* 430-R-20-002 (2020) iv

<<https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2018>>

<https://www.epa.gov/sites/production/files/2020-04/documents/us-ghg-inventory-2020-chapter-upfront_0.pdf>

³⁴ HR 8632 §1401(b)(1) (“A vessel shall measure and monitor on a per-voyage basis, and report to the Administrator and to the vessel’s flag-State on an annual basis, the following metrics: (1) Total CO₂ emitted by the vessel inside the United States exclusive economic zone.”).

³⁵ For a discussion of the EEZ, see LPDD memorandum at notes 59 and 94.

³⁶ National Oceanic and Atmospheric Administration, NOAA Fisheries, *About Us* <<https://www.fisheries.noaa.gov/about-us>>

³⁷ Magnuson-Stevens Fishery Conservation and Management Act, 16 USC 1801 et seq (Magnuson-Stevens Act), §101(a), 16 USC 1811(a). The Magnuson-Stevens Act is the “primary law governing marine fisheries management in U.S. federal waters.” National Oceanic and Atmospheric Administration, NOAA Fisheries, *Magnuson-Stevens Act* <<https://www.fisheries.noaa.gov/topic/laws-policies#magnuson-stevens-act>>

³⁸ See 50 CFR part 600.

³⁹ Magnuson-Stevens Act §311(a), 16 USC 1861(a) (“The provisions of this Act shall be enforced by the Secretary and the Secretary of the department in which the Coast Guard is operating.”). The Secretary is the Secretary of Commerce or designee. Magnuson-Stevens Act §3(39), 16 USC 1802(39).

Limiting monitoring to the EEZ would significantly decrease the program's CO₂ emissions reporting, as well as its importance. The boundary of the EEZ is generally limited to within 200 nautical miles of the coast.⁴⁰ For scale, the distance between Shanghai and Los Angeles is approximately 5600 nautical miles. Under §1401 then, approximately 96.5% of CO₂ emissions from the journey would not be reported. In contrast, the LPDD model law would require monitoring, reporting, and verification for the entire Shanghai to Los Angeles distance, thereby requiring MRV for all CO₂ emissions from the journey, similar to operation of the European Union program.⁴¹ Importantly, since §1401 relies on port State jurisdiction, a link between monitoring and the EEZ is not needed for U.S. authority under international law.⁴²

In addition, by inclusion of an EEZ limitation, §1401 suggests a line as to where greenhouse gas maritime emissions would become attributable to the United States. Though no greenhouse gas attribution option has yet to be established for international maritime transport,⁴³ a similar option, identified as "allocation to the Party of emissions generated in its national space," was deemed not viable under the UNFCCC, and was no longer considered. As the UNFCCC Secretariat noted:

As in the case of aviation, this option has a precedent in other sectors where emissions are allocated to the Party where they occur as per the IPCC Guidelines. In the case of the marine industry, it would require correlation of fuel consumption and voyage routes. A breakdown by vessel type would lead to more accuracy. However, this option would not lead to full global coverage of emissions from international marine bunkers, many of which occur in international waters. It is therefore not seen as a feasible option.⁴⁴

Ships engaged in transport of passengers or cargo for commercial purposes. Though the LPDD model law limits regulated ships to those engaged in transport of passengers or cargo for commercial purposes (as does the EU bill),⁴⁵ §1401 does not. The EU includes fishing ships as outside this limitation.⁴⁶ The primary driver, however, is ship size. Both the IMO and European Union have concluded that the vast majority of CO₂ emissions are represented by using 5,000 gross tons and above.⁴⁷

Role of International and European law. With regards to promulgation of "measuring, monitoring, and reporting" regulations, §1401 requires the Secretary of Commerce to "ensure consistency" of methods to "the maximum extent practicable" with those of the European Union

⁴⁰ See LPDD memorandum note 31.

⁴¹ The European Union MRV and LPDD model law thereby additionally reflect embedded emissions, in for example the Chinese goods imported into the United States. See LPDD memorandum §4.6.

⁴² See LPDD memorandum §3.1.2.

⁴³ See LPDD memorandum §3.1.1 at note 15.

⁴⁴ United Nations Framework Convention on Climate Change, Note by the Secretariat, *National Communications, Communications from Parties included in Annex I to the Convention: Guidelines, Schedule and Process for Consideration, Addendum, Detailed Information on Electricity Trade and International Bunker Fuels* FCCC/SBSTA/1996/9/Add.2 (1996) <<https://unfccc.int/cop3/resource/docs/1996/sbsta/09a02.htm>>

⁴⁵ LPDD §1902(a)(6)(B).

⁴⁶ See LPDD memorandum §3.1.4.1 at note 73.

⁴⁷ See LPDD memorandum §3.1.3.1 at note 59 and §3.1.4.2 at note 94.

and International Maritime Organization,⁴⁸ in order to “reduce any duplicative burden on shippers.”⁴⁹ Additionally, §1401 suggests acceptable monitoring methods.⁵⁰ These monitoring methods are replicated verbatim from the European Union MRV regulation.⁵¹ These same methods are also included in the IMO Data Collection System (IMO DCS)⁵² guidance, except for inclusion of a direct CO₂ emission measurement option.⁵³

In contrast, the LPDD model law does not reference the European Union program. However, the LPDD model law is drafted as an amendment to the APPS, which implements the IMO regulations.⁵⁴ The LPDD model law is drafted to be consistent with both the European Union and IMO programs where possible,⁵⁵ and contains further particularity with regards to regulation elements.⁵⁶

Confidentiality of emissions data. It is unclear whether, in addition to publication of an annual report, all underlying monitoring data would be made public, as it is under the European Union MRV program and the LPDD model law. Under NOAA’s fisheries regulations, confidential statistics are defined as “those submitted as a requirement of [a fishery management plan] and that reveal the business or identity of the submitter.”⁵⁷ Indeed, with regards to its required annual report, §1401 refers to the shipping sector, rather than ships within the sector. Nor does §1401 identify public access to underlying data, though the introduced bill requires the creation of publicly available databases in other instances.⁵⁸ Environmental data is not typically treated as confidential.⁵⁹ Because of the U.S. Supreme Court’s decision in *Food Marketing Institute v.*

⁴⁸ HR 8632 §1401(c)(2). It is unclear how often foreign laws serve as a statutory rule of reference absent an agreement or treaty, though the reference does clarify the intent.

⁴⁹ HR 8632 §1401(c)(2). The reference here is to “shippers.” However, it is likely to instead intend owners or operators of ships, since a shipper is “one that sends goods by any form of conveyance.” *Merriam Webster Dictionary* <<https://www.merriam-webster.com/dictionary/shipper>>

⁵⁰ HR 8632 §1401(c)(3).

⁵¹ Regulation (EU) 2015/757 of the European Parliament and of the Council of 29 April 2015 on the monitoring, reporting and verification of carbon dioxide emissions from maritime transport, and amending Directive 2009/16/EC [2015] OJ L123/55, art 5.1, annex I.B <<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32015R0757>> With the exception that in the European Union MRV regulation, “flowmeters” is two words.

⁵² See LPDD memorandum §3.1.3.1.

⁵³ International Maritime Organization, Resolution MEPC.282(70) (Oct 28, 2016) ¶¶7.1.1 - 7.1.3 <<https://pdf4pro.com/fullscreen/resolution-mepc-282-70-adopted-on-28-12db67.html>>

⁵⁴ See LPDD memorandum §§ 3.1.3, 3.2.1.

⁵⁵ See LPDD memorandum §§ 4.2, 4.3.

⁵⁶ See, e.g., LPDD §1903(c)(6)(A)(i)(I), which incorporates most of the IMO DCS requirements.

⁵⁷ 50 CFR 600.10. See also 50 CFR 600.425. (“The Assistant Administrator will not release to the public any statistics required to be submitted under [a fishery management plan] in a form that would identify the submitter, except as required by law.”) However, HR 8632 would amend the law with regards to data “relating to siting, exploration, production, or promotion of offshore wind energy on the Outer Continental Shelf” submitted to the Department of the Interior. HR 8632 §313.

⁵⁸ See, e.g. HR 8632 §108, pertaining to the “Coastal Carbon Data Clearinghouse,” containing “all coastal and marine blue carbon data” of governments and academia “collected through federally funded research” as well as collection of “existing global and national data assets.” §1251 pertaining to a “publicly available website” on government grants associated with “resiliency, adaptation, and mitigation of climate change and sea level rise;” and §1303 pertaining to a “publicly available” “coastal wetland restoration database.” HR 8632 §§108(a)-(d), 1251(a)(1), 1303(a)(1), (a)(4).

⁵⁹ See LPDD memorandum §4.5.

Argus Leader Media,⁶⁰ it is concerning that §1401 does not contain language affirming that submitted data would not be treated as confidential. As discussed in the LPDD memorandum, *Argus Leader* shows that the government should clarify if it is not providing an expectation of privacy.

Conclusion. Section 1401 and the LPDD model law contain many of the same elements. The most fundamental differences between the two relate to monitoring elements, monitoring boundaries, and confidentiality of data. In addition, further specificity and explicitness should be preferred under either approach. As Michael Gerrard has noted, “If the laws are clear and unambiguous and specific enough, Congress ties the hands of the courts.”⁶¹

⁶⁰ 139 S. Ct. 2356 (2019).

⁶¹ Shannon Osaka, *Why Amy Coney Barrett on the Supreme Court would be a Climate Disaster* Grist (Sept 25, 2020) <<https://grist.org/politics/why-amy-coney-barrett-on-the-supreme-court-would-be-a-climate-disaster/>> quoted in Spencer Bokor-Lindell, *How a Justice Amy Coney Barrett Could Change the U.S.*, New York Times (Oct 13, 2020) <<https://www.nytimes.com/2020/10/13/opinion/amy-coney-barrett.html>> See also, e.g., *County of Maui, Hawaii v. Hawaii Wildlife Fund*, No. 18-260, 590 U.S. ___, slip op at 7 (April 23, 2020) (Thomas dissenting) “... I agree that the EPA’s interpretation is not entitled to deference for at least two reasons: No party requests it, and the EPA’s reading is not the best one.”