Gap analysis of the current legislation in Ukraine and development of a roadmap outlining EU4Climate support to Ukraine in alignment with EU *acquis* included in Bilateral Agreements on Climate Action and/or Energy Community Treaty (Lot 3)

Part II: Compliance check to verify if domestic legislation in Ukraine exists and/or is compatible with the EU *acquis* included in Bilateral Agreements on Climate Action and/or Energy Community Treaty (Deliverable 2)

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List of abbreviations

AA	EU-Ukraine Association Agreement
CDM	Clean Development Mechanism
CER	Certified Emission Reductions
CMU	Cabinet of Ministers of Ukraine
CO_2	Carbon Dioxide
COP	Conference of Parties
CSs	Controlled Substances
EnC	Energy Community
EnCT	Energy Community Treaty
ERU	Emission Reduction Unit
ETS	Emissions Trading Scheme
EU	European Union
F-gases	Fluorinated greenhouse gases
GHG	Greenhouse Gas
HCFCs	Hydrochlorofluorocarbons
IP	Industrial Processes
KP	Kyoto Protocol
LEDS	Low Emissions Development Strategy
LULUCF	Land use, land-use change and forestry
MEEP	Ministry of energy and environment protection of Ukraine
MRV	Measurement, Reporting and Verification
MS	Member State
NECP	National Energy and Climate Plan
NIR	National Greenhouse Gas Emission Inventory Report
ODS	Ozone Depleting Substances
PA	Paris Agreement
UNFCCC	United Nations Framework Convention on Climate Change

1. Background and scope

The present report is prepared within the framework of the EU4Climate Programme, financed by the European Union and implemented under the indirect management of the United Nations Development Programme (UNDP). The objective of the EU4Climate Programme is to support the development and implementation of climate-related policies by the Eastern Partnership countries, which contribute to their low emission and climate resilient development and their commitments to the 2015 Paris Agreement on Climate Change.

This report presents a detailed gap analysis of existing national legislative framework of Ukraine vis-à-vis its individual commitments enshrined in the AA and EnCT. The gap analysis is based on a compliance check of domestic legislation in Ukraine against the EU *acquis* included in the AA and EnCT, achieved via concordance tables included in the present report. The gap analysis seeks to establish the transposition level of Ukraine's climate commitments under the AA and EnCT, including a compliance review and assessment thereof. The overall goal of this deliverable is advanced alignment of Ukrainian legislation in compliance with the EU climate *acquis* as provided by bilateral agreements with EU and the EnCT. Based on the findings of the present report a Roadmap outlining EU4Climate support in alignment with EU *acquis* included in Ukraine Bilateral Agreements on Climate Action and EnCT is to be further developed.

2. Compliance review and gap analysis of the national legislative framework of Ukraine vis-à-vis climate *acquis* under the Association Agreement

Pursuant to Article 363 and Annex XXX thereto of the AA until 1 September 2019[1] Ukraine has committed to adapt its national legislation in the area of climate change and ozonosphere protection in compliance with the following EU *acquis*: 1) Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Directive 96/61/EC as amended by Directive 2004/101/EC (hereinafter - **Directive 2003/87/EC**);[2] 2) Regulation (EC) 842/2006 on certain fluorinated greenhouse gases (F-gases) (hereinafter – **F-gases Regulation**); 3) Regulation (EC) 2037/2000 on substances that deplete the ozone layer (ODS) (hereinafter – **ODS Regulation**)[3].

The transposition process of the above-mentioned *acquis* shall also take into account specific versions thereof and existing circumstances. For instance, the AA explicitly

[1] According to Articles 341 and 486 of the AA and the Verbal Note of the General Secretariat of the Council of the EU No. SGS14/12029 dated 30.09.2014 the Annex XXX of the AA was subject to provisional application starting from 1 November 2014 by thus making 1 November 2017 the transposition deadline for Ukraine. Nevertheless, the period of provisional application ended on 1 September 2017 with the full entry into force of the AA.

[2] Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Directive 96/61/EC as amended by Directive 2004/101/EC.

[3] Regulation (EC) 2037/2000 on substances that deplete the ozone layer as amended by Regulations (EC) 2038/2000, (EC) 2039/2000, (EC) 1804/2003, (EC) 2077/2004, (EC) 29/2006, (EC) 1366/2006, (EC) 1784/2006, (EC) 1791/2006 and (EC) 2007/899 and Decisions 2003/160/EC, 2004/232/EC and 2007/54/EC.

refers to the version of Directive 2003/87/EC as amended by Directive 2004/101/EC[4] (hereinafter – Directive 2004/101/EC). Whereas, the ODS Regulation[5] is to be transposed and implemented in the version with latest amendments dated as of 2007. This is of particular relevance to this report as amended provisions of applicable EU *acquis* under the AA are respectively binding on Ukraine. However, despite the binding nature of the applicable EU law, its transposition shall be read in the light of existing circumstances, relevance and overall purpose of the AA commitments as indicated in the concordance tables below.

The present report duly takes into account recent legislative changes that occurred in Ukraine in mid-December. Both laws – Law of Ukraine "On Monitoring, Reporting and Verification of GHG Emissions" dated No. 377-IX (hereinafter – MRV law)[6] and the Law of Ukraine "On the regulation of economic activities with ozone-depleting substances and fluorinated greenhouse gases" No. 376-IX (hereinafter – the ODS and F-gases law)[7] – respectively fall under the scope of this analysis.

The section below seeks to establish existing gaps in Ukrainian domestic legislation as regards transposition of individual requirements and provisions of EU *acquis* in line with Ukraine's obligations under the AA in the form of concordance tables with explanations thereto. In the concordance table:

- "**Transposed"** shall mean full transposition of the respective EU climate *acquis* has taken place;
- "**Partially transposed**" shall mean partial transposition of the respective EU climate *acquis* supplemented by a comment and explanation thereto. Draft legislation can also be meant to be marked as "partially transposed";
- "**Not transposed**" shall mean failure to transpose of the respective EU climate *acquis* supplemented by a comment and explanation thereto;
- "**No transposition required**" shall mean absence of need to transpose the respective EU climate *acquis* as supplemented by a comment and explanation thereto;
- Issues that require special attention are highlighted in red.

[4] The AA explicitly refers to the Directive 2003/87/EC as amended by Directive 2004/101/EC of 27 October 2004 amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowances trading within the Community, in respect of the Kyoto Protocol's project mechanism.
[5] The AA explicitly refers to the ODS Regulation as amended by Regulations (EC) 2038/2000, (EC) 2039/2000, (EC) 1804/2003, (EC) 2077/2004, (EC) 29/2006, (EC) 1366/2006, (EC) 1784/2006, (EC) 1791/2006 and (EC) 2007/899 and Decisions 2003/160/EC, 2004/232/EC and 2007/54/EC.
[6] The MRV law enters into force on 26 March 2020 and applies from 1 January 2021.
[7] The ODS and F-gases law applies from 27 March 2020 except for provisions of Article 7(6) and Title IV of the ODS and F-gases law.

2.1. Table of Concordance of Ukraine with Directive 2003/87/EC

Country name	Ukraine
Last update:	30 January 2020
National legislation:	CMU resolution "On approval of the Action Plan for EU-Ukraine Association Agreement Implementation" of 25 October 2017 No. 1106 (hereinafter - **Action Plan for AA implementation**); CMU decision "On Approval of Action Plan on implementation of Concept of realization of state policy in the area of climate change for the period up to 2030" dated 6 December 2017 No. 878 (hereinafter - **2030 Climate Change Concept Action Plan**); CMU decree "On approval of procedure of operation of national anthropogenic emission assessment and absorption system for greenhouse gases not controlled by the Montreal Protocol on Substances that deplete the ozone layer" dated 21 April 2006 No. 554 (hereinafter - **Procedure for GHG Accounting**); CMU decree "On establishment of budget institution "National Center for GHG Accounting" of 7 November 2011 No. 1194-r (hereinafter – **Decree on National Center for GHG**); CMU decree "On the formation and maintenance of national electronic registry of anthropogenic emissions and removals of greenhouse gases" of 28 May 2008 No. 504 (hereinafter - **Decree on GHG Accounting**); CMU resolution dated 29.11.2001 No. 1598 "On approval of the list most common and dangerous pollutant substances that are emitted into the atmosphere the air, that are subject to regulation" (hereinafter - **List of CDPS**); Draft act on some issues of accreditation of the operator's report on the GHG emissions (hereinafter – **Draft act on accreditation**); Draft CMU resolution "On approval of the list of activities subject to monitoring, reporting and verification of greenhouse gas emissions" (hereinafter - **Draft List of MRV activities**).[8] Draft CMU resolution "On approving the verification procedure of the operator's report on greenhouse gas emissions" (hereinafter – **Draft verification procedure**).[9] Draft CMU resolution of "On approval of the procedure for monitoring and reporting of greenhouse gas emissions" available at the web-site of the Ministry of energy and natural resources" (hereinafter – **Draft procedure for monitoring and reporting**).[10] The Law of Ukraine "On the Protection of Atmospheric Air" (hereinafter - **PAA law);** The Law of Ukraine "On Monitoring, Reporting and Verification of GHG Emissions" dated 12.12.2019 No. 377-IX [enters into force on 26 March 2020 and applies from 1 January 2021] (hereinafter – **MRV law**)
Remarks:	Issues that require special attention are highlighted in red.

Directive 2003/87/EC		National legislation		Level of concordance / comment
Art.	**Provision / Transposition deadline**	**Art. / Law**	**Specific provision**	
(i) Adoption of national legislation and designation of competent authority/ies				
N/A	Adoption of national legislation and designation of competent authority/ies Deadline: to be implemented within 2 years of the entry into force of the	Art. 1(17) of MRV law	17) competent authority - the central body of executive power implementing state policy in the field of environmental protection, in the field of monitoring, reporting and verification of greenhouse gas emissions;	**Partially transposed** The competent authority is not designated yet.

[8] Available at the web-site of the Ministry of energy and environment protection of Ukraine: https://menr.gov.ua/news/32022.html
[9] Ibid
[10] Ibid

	AA i.e. by 1 September 2019			
(ii) Establishment of a system for identifying relevant installations and for identifying greenhouse gases (Annexes I and II)				
N/A	Establishment of a system for identifying relevant installations and for identifying greenhouse gases (Annexes I and II) Deadline: to be implemented within 2 years of the entry into force of the AA i.e. by 1 September 2019	Art. 1(1)(7) of MRV law	7) Single registry for monitoring, reporting and verification of greenhouse gas emissions (hereinafter referred to as the "Unified Register") - a single state electronic information system that ensures the collection, accumulation, processing and accounting of information on installations and documents in the field of monitoring, reporting and verification of greenhouse gas emissions;	**Partially transposed** No specific article is provided for in the Directive 2003/87/EC regarding the establishment of GHG and installations identification system. However, the MRV law lays down rules on establishment of single registry for MRV of GHG emissions. For the time being Ukraine has a domestic system in place for GHG accounting to fulfil its obligations under the UNFCCC. The system consist of organizational measures conducted via planning, annual inventory of anthropogenic emissions and removals of GHG as well as submission by ministries, other central executive bodies, enterprises and institutions information necessary for estimation of GHG emissions. The registry system for GHG emission serves the purpose of gathering information from entities engaged in activities with GHG emissions.
		Para 1 of Procedure for GHG Accounting	1. […] National system for estimation of anthropogenic emissions and removals of greenhouse gases (hereinafter - the national system) is a system of organizational and technical measures for monitoring, collecting, processing, transfer and storage of information necessary for estimation of anthropogenic emissions and removals of greenhouse gases.	
		Para 1 of Decree on GHG Accounting	1. National electronic registry of anthropogenic emissions and greenhouse gas absorption is an automated accounting system and processing information on anthropogenic emissions and removals of greenhouse gases (hereinafter referred to as the Register).	
Annex I	CATEGORIES OF ACTIVITIES REFERRED TO IN ARTICLES 2(1), 3, 4, 14(1), 28 AND 30 for Carbon dioxide GHG [See Annex II to this report] Deadline: to be implemented within 2 years of the entry into force of the	Art. 1(1)(4) of MRV law	4) type of activity - activity, the emissions of which are subject to monitoring, reporting and verification, and which is included in the list of activities approved by the Cabinet of Ministers of Ukraine;	**Partially transposed** According to MRV law the list of activities falling under its scope are to be separately adopted by CMU. For the time of writing this report such list exists only in draft and
		Para. 1 of Draft List of MRV activities	The list of types of activities, which are subject to MRV of GHG for CO_2 Fuel combustion in installations with a total rated thermal output exceeding 20 MW (excluding installations for the thermal destruction (incineration) of hazardous or household waste) Oil refining	

	AA i.e. by 1 September 2019		Production of coke Burning or sintering, including agglomeration of metal ore (including sulphide ore) Production of pig iron or steel (primary or secondary smelting), including continuous casting exceeding 2.5 tonnes per hour Production or treatment of ferrous metals (including ferroalloys) if the total rated thermal capacity of the combustion units exceeds 20 MW; equipment for the treatment of ferrous metals includes, inter alia, rolling mills, heating and annealing furnaces, forging equipment, foundries, equipment for coating (plating) and cleaning (etching) surfaces Manufacture of cement clinker in rotary kilns with a production capacity exceeding 500 tonnes per day or in other furnaces with a production capacity exceeding 50 tonnes per day Production of lime or calcination of dolomite or magnesite in rotary kilns with a production capacity exceeding 50 tonnes per day, or in other furnaces with a production capacity exceeding 50 tonnes per day Production of nitric acid Production of ammonia	complies with Annex I to the Directive 2003/87/EC. Procedure for GHG Accounting for the time being is the only applicable bylaw generally identifying the list of activities GHG emissions that fall under its scope.
		Para 2 pf Procedure for GHG Accounting	2. The national system covers all activities that (can) lead to anthropogenic greenhouse gas emissions from sources (enterprises, workshops, units, installations, vehicles, etc.) as well as those related to greenhouse gas absorption gases.	
Annex II	GREENHOUSE GASES REFERRED TO IN ARTICLES 3 AND 30: Carbon dioxide (CO_2); Methane (CH_4); Nitrous Oxide (N_2O); Hydrofluorocarbons (HFCs); Perfluorocarbons (PFCs); Sulphur Hexafluoride (SF_6) <u>Deadline:</u> to be implemented within 2 years of the entry into force of the AA i.e. by 1 September 2019	Art. 1(1)(14) of MRV law	14) greenhouse gases - gases, namely: carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF6) and other gaseous constituents of the atmosphere, and emit infrared radiation;	**Transposed**
(iii) Development of a national allocation plan to distribute allowances to installations (art. 9)				
Art. 9	National allocation plan 1. For each period referred to in Article 11(1) and (2), each Member State shall develop a national plan stating the total quantity of allowances that it intends to allocate for that period and how it	Para 2(7) 2030 Climate Change Concept Action Plan	7) Approval of the procedure for preparation of National allocation plan for allowances between installations […] timeline: within three months from the entry into force of the law on establishing an emission trading system of GHG emissions[11]	**Not transposed** No primary legislation is in place or in draft for adoption of such bylaw, which amounts to non- transposition.

[11] CMU decision "On Approval of Action Plan on implementation of Concept of realization of state policy in the area of climate change for the period up to 2030" dated 6 December 2017 No. 878.
[11] Ibid, paragraph 1728.

	proposes to allocate them. The plan shall be based on objective and transparent criteria, including those listed in Annex III, taking due account of comments from the public. The Commission shall, without prejudice to the Treaty, by 31 December 2003 at the latest develop guidance on the implementation of the criteria listed in Annex III. For the period referred to in Article 11(1), the plan shall be published and notified to the Commission and to the other Member States by 31 March 2004 at the latest. For subsequent periods, the plan shall be published and notified to the Commission and to the other Member States at least 18 months before the beginning of the relevant period. 2. National allocation plans shall be considered within the committee referred to in Article 23(1). 3. Within three months of notification of a national allocation plan by a Member State under paragraph 1, the Commission may reject that plan, or any aspect thereof, on the basis that it is incompatible with the criteria listed in Annex III or with Article 10. The Member State shall only take a decision under Article 11(1) or (2) if proposed amendments are accepted by the Commission. Reasons shall be given for any rejection decision by the Commission. <u>Deadline:</u> to be implemented within 2 years of the entry into force of the AA i.e. by 1 September 2019			
(iv) Establishment of a system for issuing greenhouse gas emissions permits and issuance of allowances to be traded domestically among installations in Ukraine (art. 4 and 11 - 13)				

Art. 4	Greenhouse gas emissions permits Member States shall ensure that, from 1 January 2005, no installation undertakes any activity listed in Annex I resulting in emissions specified in relation to that activity unless its operator holds a permit issued by a competent authority in accordance with Articles 5 and 6, or the installation is temporarily excluded from the Community scheme pursuant to Article 27. Deadline: to be implemented within 2 years of the entry into force of the AA i.e. by 1 September 2019	Art. 11 (item 5 – 7) of PAA law	Emissions of pollutants into the ambient air by stationary sources can be carried out after obtaining a permit by a business entity whose object belongs to the second or third group, regional, Kyiv, Sevastopol city state administrations, executive body of the Autonomous Republic of Crimea on issues of protection of natural environment upon approval with the central body of executive power, which implements the state policy in the sphere of sanitary and epidemic well-being of the population. [Part 5 of Article 11, as amended by Law No. 5456-VI of 10/16/2012] Emissions of pollutants into the ambient air by stationary sources may be carried out on the basis of a permit issued to a business entity whose object belongs to the first group, to a business entity whose object is located within the exclusion zone, the unconditional (mandatory) resettlement zone that was the subject to radioactive contamination as a result of the Chornobyl disaster, by the central executive body implementing state policy in the field of environmental protection, upon approval with the central body of executive power, which implements the state policy in the sphere of sanitary and epidemic welfare of the population. The first group includes entities that are publicly accounted for and have manufacturing or process equipment that must incorporate environmentally sound technologies and management methods. The second group includes entities that are publicly accounted for and have no production facilities or technological equipment on which environmentally sound technologies and management practices are to be implemented. The third group includes objects that are not in the first and second groups.	**Not transposed** Permit is issued for the emission of pollutants from stationary sources on the basis of Art. 11 of PAA Law. The list of such pollutants is adopted at the level of CMU. As of today, the existing List of CDPS fails to cover all GHG and thus is lacking compliance with Annex II to the Directive 2003/87/EC. At the same time, adoption of permitting system procedure for GHG emission is envisaged in paragraph 1730 of the AA Implementation Plan and paragraph 2(8) of 2030 Climate Change Concept Action Plan.
		List of CDPS	The list of the most common and dangerous pollutants substances whose emissions into the air are subject to regulation: **Common pollutants:** Nitrogen oxides Benz (a) pyrene Dioxide and other sulfur compounds Carbon monoxide Ozone Substances in the form of suspended solids (microparticles and fibers) Lead and its compounds Formaldehyde **Dangerous pollutants:** Metals and their compounds Organic amines Volatile organic compounds Persistent organic compounds Chlorine, bromine and their compounds Fluorine and its compounds Cyanides	

			Freons Arsenic and its compounds	
Art. 11	Allocation and issue of allowances 1. For the three-year period beginning 1 January 2005, each Member State shall decide upon the total quantity of allowances it will allocate for that period and the allocation of those allowances to the operator of each installation. This decision shall be taken at least three months before the beginning of the period and be based on its national allocation plan developed pursuant to Article 9 and in accordance with Article 10, taking due account of comments from the public. 2. For the five-year period beginning 1 January 2008, and for each subsequent five-year period, each Member State shall decide upon the total quantity of allowances it will allocate for that period and initiate the process for the allocation of those allowances to the operator of each installation. This decision shall be taken at least 12 months before the beginning of the relevant period and be based on the Member State's national allocation plan developed pursuant to Article 9 and in accordance with Article 10, taking due account of comments from the public. 3. Decisions taken pursuant to paragraph 1 or 2 shall be in accordance with the requirements of the Treaty, in particular Articles 87 and 88 thereof. When deciding upon allocation, Member States shall take into account the need to provide access to allowances for new entrants. 4.The competent authority shall	Paragraph 1729(2) of the AA Implementation Plan	development and adoption of an appropriate legal act on the mechanism and plan for allocation of greenhouse gas emission allowances for installations of the greenhouse gas emission trading system	**Not transposed** No primary legislation is in place or in draft for adoption of such bylaw, which amounts to non- transposition.

	issue a proportion of the total quantity of allowances each year of the period referred to in paragraph 1 or 2, by 28 February of that year. Deadline: to be implemented within 2 years of the entry into force of the AA i.e. by 1 September 2019			
Art. 11a [As amended by Directive 2004/101/EC]	Use of CERs and ERUs from project activities in the Community scheme 1. Subject to paragraph 3, during each period referred to in Article 11(2), Member States may allow operators to use CERs [Certified Emission Reductions] and ERUs [Emission Reduction Units] from project activities in the Community scheme up to a percentage of the allocation of allowances to each installation, to be specified by each Member State in its national allocation plan for that period. This shall take place through the issue and immediate surrender of one allowance by the Member State in exchange for one CER or ERU held by the operator in the national registry of its Member State. 2. Subject to paragraph 3, during the period referred to in Article 11(1), Member States may allow operators to use CERs from project activities in the Community scheme. This shall take place through the issue and immediate surrender of one allowance by the Member State in exchange for one CER. Member States shall cancel CERs that have been used by operators during the period referred to in Article 11(1). 3. All CERs and ERUs that are issued and may be used in accordance with the UNFCCC and the Kyoto Protocol and subsequent decisions adopted thereunder may		No transposition required	**No transposition required** The purpose of this provision is to allow business entities using certain emission reduction units generated under the Kyoto Protocol mechanisms to meet their obligations under the Directive 2003/87/EC. At the same time, the first commitment period of Kyoto Protocol started in 2008 and ended in 2012. The Doha amendment, which planned to extend the KP commitments from 1 January 2013 until 31 December 2020 has not entered into force for the time of writing this report (its entry into force requires ratification by minimum 144 countries). Nevertheless, this Article has lost its relevance in the light of new international agreement being in force - the PA, which effectively replaced the KP. The PA envisages a new market mechanism to replace the CDM and JI after 2020.

	be used in the Community scheme: (a) except that, in recognition of the fact that, in accordance with the UNFCCC and the Kyoto Protocol and subsequent decisions adopted thereunder, Member States are to refrain from using CERs and ERUs generated from nuclear facilities to meet their commitments pursuant to Article 3(1) of the Kyoto Protocol and in accordance with Decision 2002/358/EC, operators are to refrain from using CERs and ERUs generated from such facilities in the Community scheme during the period referred to in Article 11(1) and the first five-year period referred to in Article 11(2); and (b) except for CERs and ERUs from land use, land use change and forestry activities. Deadline: to be implemented within 2 years of the entry into force of the AA i.e. by 1 September 2019			
Art. 11b [As amended by Directive 2004/101/EC]	Project activities 1. Member States shall take all necessary measures to ensure that baselines for project activities, as defined by subsequent decisions adopted under the UNFCCC or the Kyoto Protocol, undertaken in countries having signed a Treaty of Accession with the Union fully comply with the acquis communautaire, including the temporary derogations set out in that Treaty of Accession. 2. Except as provided for in paragraphs 3 and 4, Member States hosting project activities shall ensure that no ERUs or CERs are issued for reductions or limitations of greenhouse gas emissions from installations falling within the scope of this Directive.		No transposition required	**No transposition required** See above

	3 Until 31 December 2012, for JI and CDM project activities which reduce or limit directly the emissions of an installation falling within the scope of this Directive, ERUs and CERs may be issued only if an equal number of allowances is cancelled by the operator of that installation. 4. Until 31 December 2012, for JI and CDM project activities which reduce or limit indirectly the emission level of installations falling within the scope of this Directive, ERUs and CERs may be issued only if an equal number of allowances is cancelled from the national registry of the Member State of the ERUs' or CERs' origin. 5. A Member State that authorises private or public entities to participate in project activities shall remain responsible for the fulfilment of its obligations under the UNFCCC and the Kyoto Protocol and shall ensure that such participation is consistent with the relevant guidelines, modalities and procedures adopted pursuant to the UNFCCC or the Kyoto Protocol. 6. In the case of hydroelectric power production project activities with a generating capacity exceeding 20 MW, Member States shall, when approving such project activities, ensure that relevant international criteria and guidelines, including those contained in the World Commission on Dams November 2000 Report "Dams and Development — A New Framework for Decision-Making", will be respected during the development of such project activities. 7. Provisions for the implementation of paragraphs 3 and			

	4, particularly in respect of the avoidance of double counting, and any provisions necessary for the implementation of paragraph 5 where the host party meets all eligibility requirements for JI project activities shall be adopted in accordance with Article 23(2). Deadline: to be implemented within 2 years of the entry into force of the AA i.e. by 1 September 2019			
Art. 12	Transfer, surrender and cancellation of allowances 1. Member States shall ensure that allowances can be transferred between: (a) persons within the Community; (b) persons within the Community and persons in third countries, where such allowances are recognised in accordance with the procedure referred to in Article 25 without restrictions other than those contained in, or adopted pursuant to, this Directive. 2. Member States shall ensure that allowances issued by a competent authority of another Member State are recognised for the purpose of meeting an operator's obligations under paragraph 3. 3. Member States shall ensure that, by 30 April each year at the latest, the operator of each installation surrenders a number of allowances equal to the total emissions from that installation during the preceding calendar year as verified in accordance with Article 15, and that these are subsequently cancelled. 4. Member States shall take the necessary steps to ensure that		None	**Not transposed**

	allowances will be cancelled at any time at the request of the person holding them. Deadline: to be implemented within 2 years of the entry into force of the AA i.e. by 1 September 2019			
Art. 13	Validity of allowances 1. Allowances shall be valid for emissions during the period referred to in Article 11(1) or (2) for which they are issued. 2. Four months after the beginning of the first five-year period referred to in Article 11(2), allowances which are no longer valid and have not been surrendered and cancelled in accordance with Article 12(3) shall be cancelled by the competent authority. Member States may issue allowances to persons for the current period to replace any allowances held by them which are cancelled in accordance with the first subparagraph. 3.Four months after the beginning of each subsequent five-year period referred to in Article 11(2), allowances which are no longer valid and have not been surrendered and cancelled in accordance with Article 12(3) shall be cancelled by the competent authority. Member States shall issue allowances to persons for the current period to replace any allowances held by them which are cancelled in accordance with the first subparagraph. Deadline: to be implemented within 2 years of the entry into force of the AA i.e. by 1 September 2019		None	**Not transposed**

(v) Establishment of monitoring, reporting, verification and enforcement systems and public consultations procedures (art. 9, 14 – 17, 19 and 21)				
Art. 9	See above		None	**Not transposed**
Art. 14	Article 14 Guidelines for monitoring and reporting of emissions 1. The Commission shall adopt guidelines for monitoring and reporting of emissions resulting from the activities listed in Annex I of greenhouse gases specified in relation to those activities, in accordance with the procedure referred to in Article 23(2), by 30 September 2003. The guidelines shall be based on the principles for monitoring and reporting set out in Annex IV. 2. Member States shall ensure that emissions are monitored in accordance with the guidelines. 3. Member States shall ensure that each operator of an installation reports the emissions from that installation during each calendar year to the competent authority after the end of that year in accordance with the guidelines. <u>Deadline:</u> to be implemented within 2 years of the entry into force of the AA i.e. by 1 September 2019	Art. 7 of MRV Law	1. The powers of the central body of executive power to ensure the development of state policy in the field of environmental protection in the field of monitoring, reporting and verification shall include: […] 4) approval of the standard forms of the standardized and simplified monitoring plan, the improvement report and the operator's report, as well as the requirements for their completion; […] 6) other functions in the field of monitoring, reporting and verification in accordance with the legislation.	**Partially transposed** The following two observations are to be made in respect of transposition of Article 14 of the Directive 2003/87/EC. First of all, Ukraine is not bound to use relevant EU guidelines in force when applying the AA provisions, unless explicitly provided otherwise.[12] It implies that Ukraine has discretionary powers in this regard. That means that Ukraine might be guided by EU Commission guidelines on a voluntary basis. On the other hand, the explicit reference to Article 14 of Directive 2003/87/EC in the wording of the AA might also imply that relevant guidelines should be in place on the national level. The MRV law in this respect envisages certain powers for MEEP and the competent authority to adopt respective templates and carry out methodological guidance. However, no legal framework
		Art. 8 of MRV Law	Article 8. Powers of the competent authority in the field of monitoring, reporting and verification of greenhouse gas emissions from installations located in the territory of Ukraine 1. In accordance with the tasks assigned to it, the competent authority shall: 1) summarize the practice of law enforcement, develop and submit proposals for improvement of legislative acts and acts of the Cabinet of Ministers of Ukraine in the field of monitoring, reporting and verification, in particular: a) the procedure for monitoring and reporting greenhouse gas emissions; b) the procedure for verifying the operator's report; c) the list of activities; 2) provide information and clarify on the implementation of state policy in the field of monitoring, reporting and verification; 3) carry out organizational and methodological guidance and coordination of work related to monitoring, reporting and verification; […] 10) exchange information and coordinate actions with the national accreditation body of Ukraine and the central body of executive power, which implements the state policy on state supervision (control) in the field of environmental protection, rational use, reproduction and protection of natural resources; 11) participate in international cooperation on monitoring, reporting and	

[12] It is to be noted that in the area related to state-aid Article 264 of the AA explicilty provides that EU and Ukraine agree to apply specific AA articles [Article 262, Article 263(3) or Article 263(4)] using as sources of interpretation the criteria arising from the application of Articles 106, 107 and 93 of the Treaty on the Functioning of the European Union, including the relevant jurisprudence of the Court of Justice of the European Union, as well as relevant secondary legislation, frameworks, guidelines and other administrative acts in force in the European Union.

			verification, study, synthesis and dissemination of international experience in the field; 12) performs other functions in the field of monitoring, reporting and verification in accordance with the legislation.	is in place to comply with Annex IV of Directive 2003/87/EC, which sets out the principles for monitoring and reporting. On the other hand, one may argue that transposition of this Article shall be read in the light of legislative changes that occurred in the EU. Article 14 of Directive 2009/73/EC lays down rules on establishing MRV guidelines.[13] Based on this Article the EU Commission adopted a number of guidelines. Following the revision of the Directive 2003/87/EC in 2009, MRV rules have been laid down in the form of *Regulation 600/2012* on for verification of emissions and accreditation of verifiers[14] and *Regulation 601/2012* on rules for monitoring and reporting of GHG emission.[15] This is to say, that EU Commission guidelines adopted pursuant to Article 14 are therefore replaced by the above-mentioned Regulations. Ukrainian law envisages the establishment of MRV system with the verification mechanism to be in place and

[13] Commission Decision of 18 July 2007 establishing guidelines for the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council; Commission Decision 2004/156/EC of 29 January 2004 establishing guidelines for the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council.
[14] Commission Regulation (EU) No 600/2012 of 21 June 2012 on the verification of greenhouse gas emission reports and tonne-kilometre reports and the accreditation of verifiers pursuant to Directive 2003/87/EC of the European Parliament and of the Council.
[15] Commission Regulation (EU) No 601/2012 of 21 June 2012 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council.

				thus reflects the general principles and provisions of both mentioned Regulations[16] and Directive 2003/87/EC in compliance with its obligation under the AA.
Art. 15	Verification Member States shall ensure that the reports submitted by operators pursuant to Article 14(3) are verified in accordance with the criteria set out in Annex V [*please see Annex 2 to this Report*], and that the competent authority is informed thereof. Member States shall ensure that an operator whose report has not been verified as satisfactory in accordance with the criteria set out in Annex V by 31 March each year for emissions during the preceding year cannot make further transfers of allowances until a report from that operator has been verified as satisfactory. Deadline: to be implemented within 2 years of the entry into force of the AA i.e. by 1 September 2019	Art. 10(3, 5-6) of MRV law	3. Based on the monitoring results, the operator shall develop a report, which is subject to verification. The operator's report shall be prepared in a standard form approved by the Central Executive Body, which shall ensure the development of state policy in the field of environmental protection, monitoring, reporting and verification. The verifier performs the verification on the basis of a contract concluded with the operator. […] 5. Based on the information received during the verification, an operator shall be issued with a verification report, which shall include the verifier's conclusion on the results of the verification. The grounds for the verifier's recognition of the operator's report as satisfactory or unsatisfactory shall be established by the procedure for verifying the operator's report. 6. An operator's report, recognized as satisfactory, shall be submitted to the competent authority together with the verification report and the statement of acceptance of the operator's report no later than 31 March of the year following the reporting period. Documents for acceptance of the operator's report may be submitted to the authorized body personally by the operator or his authorized person in electronic form through the Unified Register in compliance with the requirements of the laws on electronic document circulation and electronic digital signature. The authorized body shall, within 20 working days from the date of submission of the documents for acceptance of the operator's report: check the documents submitted by the operator for compliance with the requirements of the legislation; adopt the decision to accept the operator's report return to the operator the submitted documents together with the reasoned opinion in case of refusal to accept the report of the operator. The operator's report is accepted free of charge. An operator's report may be refused if: submission of documents by an improper person; submission of incomplete package of documents for acceptance of the operator's report; identification in the documents submitted for acceptance of the	**Partially transposed** Despite the overall compliance with Art. 15 and Annex V thereto, CMU shall proceed with the adoption of respective secondary legislation (existing in draft for the time being). In addition, in the absence of ETS rules, full compliance cannot be established.

[16] The assessment of transposition of Regulation No 600/2012 and Regulation No 601/2012 falls outside the excplicit scope of this report.

			operator's report, false information; submission of the report of the operator found to be unsatisfactory by the verification results; failure to remedy the circumstances which led to the decision to refuse to accept the operator's report after the expiration of the period set in paragraph fifteen of this part. If there are grounds for refusal to accept the operator's report, the authorized body shall decide to refuse to accept the operator's report. The decision refusing to accept an operator's report shall state an exhaustive list of the circumstances that led to such a decision. […]	
		Paragraphs 7, 8, 22 of Draft verification procedure	7. At the beginning of the verification process, the verifier shall assess the likely nature, scope and complexity of the verification tasks by conducting a strategic analysis of the installation activity. […] 8. For the development, planning and conduction of the effective verification the verification shall conduct risk analysis. 22. Based on the information received during the verification, the verifier shall provide the operator with a verification report. A separate verification report shall be provided for each report of the operator to be verified. […] The verification report shall include the following elements: […] criteria applicable to the verification report of the operator, inter alia, version of the monitoring plan, approved by the competent authority and the duration of the monitoring plan; […] 27. The verification shall be carried out by the verifier in accordance with the requirements established by the legislation on accreditation, national accreditation standards harmonized with the relevant international and European standards, in particular in accordance with DSTU ISO / IEC 17011: 2005 and DSTU ISO 14065: 2015 or other standards, which can be replaced, as well as other accreditation documents adopted by the national accreditation body of Ukraine, international and European accreditation organizations.	
Art. 16	Penalties 1. Member States shall lay down the rules on penalties applicable to infringements of the national provisions adopted pursuant to this Directive and shall take all measures necessary to ensure that	Para 1 Art. 19 of MRV law	Article 19(1) Responsibility for violation of legislation in the area of monitoring, reporting and verification of GHG emission from installations, located at the territory of Ukraine. 1. Persons, liable for breaching the present Law bear responsibility in accordance with the law.	**Partially Transposed** The Directive 2003/87/EC leaves discretion to MS as to designing the rules on enforcement measures, except for the “name-and-
		Art. 29(3) MRV law	Article 29(3). Introduce amendments to the following legal acts: 1) in the Code of Ukraine on Administrative Offenses (Information of the	

	such rules are implemented. The penalties provided for must be effective, proportionate and dissuasive. Member States shall notify these provisions to the Commission by 31 December 2003 at the latest, and shall notify it without delay of any subsequent amendment affecting them. 2. Member States shall ensure publication of the names of operators who are in breach of requirements to surrender sufficient allowances under Article 12(3). 3. Member States shall ensure that any operator who does not surrender sufficient allowances by 30 April of each year to cover its emissions during the preceding year shall be held liable for the payment of an excess emissions penalty. The excess emissions penalty shall be EUR 100 for each tonne of carbon dioxide equivalent emitted by that installation for which the operator has not surrendered allowances. Payment of the excess emissions penalty shall not release the operator from the obligation to surrender an amount of allowances equal to those excess emissions when surrendering allowances in relation to the following calendar year. 4. During the three-year period beginning 1 January 2005, Member States shall apply a lower excess emissions penalty of EUR 40 for each tonne of carbon dioxide equivalent emitted by that installation for which the operator has not surrendered allowances. Payment of the excess emissions penalty shall not release the operator from the obligation to surrender an amount of allowances		Verkhovna Rada of the USSR, 1984, supplement to No. 51, Article 1122): amend Article 91^6 to read as follows: "Article 91^6. Violations of the Legislation in the Field of Monitoring, Reporting and Verification of Greenhouse Gas Emissions Violation by the operator of the requirements of the legislation in the field of monitoring, reporting and verification of greenhouse gas emissions: Violation by the operator of the requirements of the legislation in the field of monitoring, reporting and verification of greenhouse gas emissions: failure to comply with the obligation to state registration of the installation or to amend the records of the Single Registry for monitoring, reporting and verification of greenhouse gas emissions; failure to submit a monitoring plan, a monitoring plan with amendments, an improvement report, an operator's report that is considered satisfactory by the verification results, and a verification report in accordance with the procedure established by law; providing the verifier or central executive body implementing state environmental policy in the field of monitoring, reporting and verification of greenhouse gas emissions, whether or not the information related to the monitoring operator's implementation is known to be inaccurate or incomplete; non-implementation of the approved monitoring plan, monitoring plan with changes, - entail fines on individuals - entrepreneurs of one hundred to three hundred tax-free minimum incomes and officials - fifty to eighty tax-free minimum incomes. Repeated within one year of committing the violation provided for in paragraph 1 of this Article for which the person has already been subjected to administrative penalty, - entails the imposition of a fine on individuals - entrepreneurs from five hundred to one thousand tax-free minimum incomes of citizens and on officials - from two hundred fifty to four hundred non-taxable minimum incomes of citizens with the deprivation of the right to occupy certain positions or occupy certain positions"; Chapter 13 is supplemented by Article 172^{1-2}, as follows: "Article 172^{1-2}. Violation of procedures to verify the operator's report on greenhouse gas emissions Violation by the verifier of the verification procedures of the operator's GHG report - entails a fine of fifty to eighty non-taxable minimum incomes for the verifier's officers. The same acts committed by a person who has been subject to administrative penalties for the offense referred to in paragraph 1 of this	shame" sanction as per Article 16(2) and an excess emissions penalty under Article 16(3). However, having regard that Ukraine is at the very first stage of setting up MRV system for GHG emissions being fundamental pre-condition for ETS, the mentioned penalty requirements cannot be envisaged yet.

	equal to those excess emissions when surrendering allowances in relation to the following calendar year. Deadline: to be implemented within 2 years of the entry into force of the AA i.e. by 1 September 2019		Article during the year, - entail the imposition of a fine on officials of the verifier from two hundred and fifty to four hundred non-taxable minimum incomes of citizens with the deprivation of the right to hold certain positions or engage in certain activities for a term of one year ”;	
Art. 17 [As amended by Directive 2004/101/EC]	Access to information Decisions relating to the allocation of allowances, information on project activities in which a Member State participates or authorises private or public entities to participate, and the reports of emissions required under the greenhouse gas emissions permit and held by the competent authority, shall be made available to the public in accordance with Directive 2003/4/EC. Deadline: to be implemented within 2 years of the entry into force of the AA i.e. by 1 September 2019	Art. 16 of MRV law	Information on greenhouse gas emissions 1. The legal regime of the information contained in the documents on monitoring, reporting and verification is determined by the laws of Ukraine and the international treaties of Ukraine, the consent of which is provided by the Verkhovna Rada of Ukraine. 2. Information on quantitative and qualitative indicators of greenhouse gas emissions is open and cannot be restricted.	**Not transposed** The access to information as referred to in Article 17 of Directive 2003/87/EC relates to the allocation of allowances, whereas the MRV law only covers GHG emissions.
Art. 19	Registries 1. Member States shall provide for the establishment and maintenance of a registry in order to ensure the accurate accounting of the issue, holding, transfer and cancellation of allowances. Member States may maintain their registries in a consolidated system, together with one or more other Member States. 2. Any person may hold allowances. The registry shall be accessible to the public and shall contain separate accounts to record the allowances held by each person to whom and from whom allowances are issued or transferred. 3. In order to implement this Directive, the Commission shall	Paragraph 1730 of the AA Implementation	[…] the development and adoption of regulatory act on software for the functioning of the registry for allowances and installations subject to emission trading system.	**Not transposed** No primary legislation is in place or in draft for adoption of such bylaw, which amounts to non- transposition.

	adopt a Regulation in accordance with the procedure referred to in Article 23(2) for a standardised and secured system of registries in the form of standardised electronic databases containing common data elements to track the issue, holding, transfer and cancellation of allowances, to provide for public access and confidentiality as appropriate and to ensure that there are no transfers incompatible with obligations resulting from the Kyoto Protocol. *That Regulation shall also include provisions concerning the use and identification of CERs and ERUs in the Community scheme and the monitoring of the level of such use.* [The last sentence as amended by Directive 2004/101/EC] Deadline: to be implemented within 2 years of the entry into force of the AA i.e. by 1 September 2019			
Art. 21	Reporting by Member States 1. Each year the Member States shall submit to the Commission a report on the application of this Directive. This report shall pay particular attention to the arrangements for the allocation of allowances, the use of ERUs and CERs in the Community scheme, the operation of registries, the application of the monitoring and reporting guidelines, verification and issues relating to compliance with the Directive and the fiscal treatment of allowances, if any. The first report shall be sent to the Commission by 30 June 2005. The report shall be drawn up on the basis of a questionnaire or outline drafted by the Commission in accordance with the procedure laid down in Article 6 of Directive		None	**No transposition required** Given that Ukraine is not a EU MS, such reporting scheme cannot be applied. Moreover, the AA already envisages a yearly reporting mechanism on the AA implementation both at the level of Ukraine and EU, covering the implementation of Directive 2003/87/EC. Therefore, no further reporting should be required. In addition, the use of ERUs and CERs has no longer relevance with the entry into force of the PA [See above].

	91/692/EEC. The questionnaire or outline shall be sent to Member States at least six months before the deadline for the submission of the first report. [Paragraph 1 of the second sentence as amended by Directive 2004/101/EC] 2. On the basis of the reports referred to in paragraph 1, the Commission shall publish a report on the application of this Directive within three months of receiving the reports from the Member States. 3.The Commission shall organise an exchange of information between the competent authorities of the Member States concerning developments relating to issues of allocation, the use of ERUs and CERs in the Community scheme, the operation of registries, monitoring, reporting, verification and compliance with this Directive. [Paragraph 3 as amended by Directive 2004/101/EC] Deadline: to be implemented within 2 years of the entry into force of the AA i.e. by 1 September 2019			
N/A	Public consultation procedure Deadline: to be implemented within 2 years of the entry into force of the AA i.e. by 1 September 2019	Art. 17 of MRV law	1. Public associations, their members or authorized representatives, as well as natural or legal persons, their associations, organizations or groups, have the following rights in the areas of monitoring, reporting and verification: 1) to request and receive from the state authorities in the scope and procedure established by the legislation, information on their activities in the field of monitoring, reporting and verification; 2) to submit proposals for improvement of regulatory regulation of relations arising in the sphere of monitoring, reporting and verification to the state authorities and persons involved in decision-making on these issues; 3) take measures to inform the public on monitoring, reporting and verification. The laws of Ukraine may also specify other rights of the public in the field of monitoring, reporting and verification.	**Transposed** The Directive 2003/87/EC does not provide for separate provision/article on public consultation procedure, though some references exist throughout the text of the Directive 2003/87/EC. Namely, in Art. 9 MS while developing the national allocation plan should be "*taking due account of comments from the public*". Ukrainian law has provisions on engaging the public in the decision-making process.

2.2. Concluding remarks regarding the transposition of the Directive 2003/87/EC

The newly adopted MRV law for the time being is the main piece of legislation transposing MRV-related provisions in line with Directive 2003/87/EC. Despite the transposition delay and its pending entry into force, it aims at establishing a regulatory regime for Ukrainian MRV system being fundamental pre-condition for setting up an ETS. It lays down rules for designating a competent authority, a registry system for GHG and installations as well as penalty rules in compliance with the Directive 2003/87/EC. Moreover, the MRV Law reflects provisions of Regulation 600/2012 on for verification of emissions and accreditation of verifiers[17] and Regulation 601/2012 on rules for monitoring and reporting of GHG emission[18] analysis of which, however, falls outside the scope of this report.

Some of the secondary legislation necessary for effective implementation of the MRV law already exists in draft and is expected to be adopted by end of September 2020.[19]

Nevertheless, the MRV law is missing fundamental provisions of Directive 2003/87/EC in respect of the creation of an ETS. By virtue of Ukraine's obligations under the AA those include, inter alia, rules on development of national allocation plan to distribute allowances to installations, including rules on establishing and maintaining of a publicly accessible registry in order to ensure the accurate accounting of the issue, holding, transfer and cancellation of allowances. In the absence of the mentioned ETS-related provisions, Ukraine thus fails to fully transpose the Directive 2003/87/EC in breach of its commitments under the AA. However, the reasonable explanation thereto is that creating a comprehensive and credible MRV system shall be a vital pre-condition for setting up an ETS. Thus, prolongation of the transposition deadline for Directive 2003/87/EC shall be considered in this regard.

On a separate note, certain provisions of the Directive 2003/87/EC have lost their relevance and/or are effectively substituted in Ukraine. This particularly relates to amendments introduced by Directive 2004/101/EC[20], which are no longer applicable given the entry into force of the PA, and the reporting mechanism for implementation of Directive 2003/87/EC, already existing in the AA at both levels – the EU and Ukraine.

[17] Commission Regulation (EU) No 600/2012 of 21 June 2012 on the verification of greenhouse gas emission reports and tonne-kilometre reports and the accreditation of verifiers pursuant to Directive 2003/87/EC of the European Parliament and of the Council.

[18] Commission Regulation (EU) No 601/2012 of 21 June 2012 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council.

[19] Pursuant to paragraph 4 of the Final and Transitional provisions of the MRV law within six months from its entry into force [being 26 March 2020] the CMU shall adopt necessary secondary legislation for purposes of implementation of MRV law.

[20] The Directive 2004/101/EC amending the Directive 2003/87/EC intended to assist the EU in meeting its Kyoto commitments so that certified emission reductions (CERs) from CDM projects and ERUs from JI projects could be traded in the EU ETS. Subject to some limitations the Directive 2004/101/EC made it possible to convert project-based credits that meet the Kyoto standards into EU allowances. This allowed business entities in the EU subject to EU ETS to drawn on CDM and JI credits in meeting their targets under that scheme.

2.3. Table of Concordance of Ukraine with F-gases Regulation

Country name	Ukraine
Last update:	30 January 2020
National legislation:	The Law of Ukraine "On the regulation of economic activities with ozone-depleting substances and fluorinated greenhouse gases" No.376-IX dated 12.12.2019 [applies from 27 March 2020, except for provisions of Article 7(6) and Title IV] (hereinafter – **the ODS and F-gases law**)
Remarks:	Issues that require special attention are highlighted in red.

Regulation (EC) 842/2006 on certain fluorinated greenhouse gases		**National legislation**		**Level of concordance / comment**
Art.	**Provision / Transposition deadline**	**Art. / Law**	**Specific provision**	
(i) Adoption of national legislation and designation of competent authority/ies				
N/A	Adoption of national legislation and designation of competent authority/ies Deadline: to be implemented within 2 years of the entry into force of the AA i.e. by 1 September 2019	Art. 3 of ODS and F-gases law	Article 3. State administration in the field of regulation of controlled substances 1. The state administration in the field of regulation of controlled substances shall be carried out by the Cabinet of Ministers of Ukraine, the central executive body ensuring the formation of state policy in the field of environmental protection and ecological safety, the central executive body implementing the state policy in the field of environmental protection and ecological safety, the central executive body implementing the state policy on state surveillance (control) in the field of protection and the environment, the rational use, reproduction and protection of natural resources, the central body of executive power, which implements state policy in the field of state customs, state policy in the field of dealing with violations in the application of customs legislation.	**Partially transposed** The ODS and F-gases law does not explicitly define the notion of a "competent authority", however envisages establishing several bodies in the field of CSs. The leading role is to be performed by MEEP. No secondary legislation is in place to designate the respective authorities.
(ii) Establishment/adaptation of national training and certification requirements for relevant personnel and companies (art. 5)				
Art. 5	Training and certification 1. By 4 July 2007, on the basis of information received from Member States and in consultation with the relevant sectors, minimum requirements and the conditions for	Art. 10 of ODS and F-gases law	1. Training of individuals applying for a qualification document (certificate) to perform works on: installation, maintenance, technical maintenance, repair or decommissioning of refrigeration, air-conditioning and heating pumping equipment, equipment containing solvents based on controlled substances, fire protection systems and fire extinguishers, refrigerated vehicles and	**Transposed** Given that provisions of Article 5 F-gases Regulation relate to the mutual recognition of certification

	mutual recognition shall be established in accordance with the procedure referred to in Article 12(2) in respect of training programmes and certification for both the companies and the relevant personnel involved in installation, maintenance or servicing of the equipment and systems covered by Article 3(1) as well as for the personnel involved in the activities provided for in Articles 3 and 4. 2. By 4 July 2008, Member States shall establish or adapt their own training and certification requirements, on the basis of the minimum requirements referred to in paragraph 1. Member States shall notify the Commission of their training and certification programmes. Member States shall give recognition to the certificates issued in another Member State and shall not restrict the freedom to provide services or the freedom of establishment for reasons relating to the certification issued in another Member State. 3. The operator of the relevant application shall ensure that the relevant personnel have obtained the necessary certification, referred to in paragraph 2, which implies appropriate knowledge of the applicable regulations and standards as well as the necessary competence in emission prevention and recovery of fluorinated greenhouse gases and handling safely the relevant type and size of equipment. 4. By 4 July 2009 Member States shall ensure that the		refrigerated trailers, high-voltage refrigerators, high-voltage refrigerators; checking for leaks from refrigeration, air-conditioning and heating pumping equipment, equipment containing solvents based on controlled substances, fire protection systems and fire extinguishers, in refrigerated vehicles and refrigerated trailers; recuperation of controlled substances; neutralization of controlled substances; which may be carried out on the basis of higher education institutions, postgraduate education institutions and other educational establishments, as well as on the basis of economic entities which are operators of controlled substances in accordance with the obtained license for educational activities under the curricula defined in the second paragraph of this Article. 2. Training of individuals applying for a qualification document (certificate) is carried out according to the programs, which provide for the acquisition of the following professional knowledge and skills: knowledge of legal acts and technical standards for conducting activities with controlled substances and goods containing them; safe handling of equipment of the type and size covered by the qualification document (certificate); taking measures to prevent leakages and emissions, eliminate the effects of leakages and releases of controlled substances; recovery, regeneration, recycling and disposal of controlled substances; knowledge of the technologies for the replacement or reduction of the use of controlled substances, as well as safe handling. Accreditation of educational programs for training individuals who apply for a qualification document (certificate) is carried out in accordance with the Law of Ukraine "On Education". The development of educational programs takes into account the minimum requirements for training programs established by the central body of executive power, which ensures the formation of state policy in the field of environmental protection and ecological safety. 3. Upon completion of the study, the person receives a qualification document (certificate) confirming the results of the examination.	requirements as well as reporting to the EU Commission are not applicable to Ukraine, Ukrainian law is in overall transposition of this Article 5(4) and (3).
		Art. 11 of ODS and F-gases law	Article 11. Confirmation of qualification of personnel 1. The qualification document (certificate) for the performance of the work specified in the first paragraph of Article 10 of this Law shall be issued in accordance with the procedure established by the Cabinet of Ministers of Ukraine. […]	

	companies involved in carrying out the activities provided for in Articles 3 and 4 shall only take delivery of fluorinated greenhouse gases where their relevant personnel hold the certificates mentioned in paragraph 2 of this Article. 5. By 4 July 2007 the Commission shall determine, in accordance with the procedure referred to in Article 12(2), the format of the notification referred to in paragraph 2 of this Article. Deadline: to be implemented within 2 years of the entry into force of the AA i.e. by 1 September 2019		Information on persons who have received qualification documents (certificates) is entered in the Register in order to ensure the state registration of persons who have received qualification documents (certificates).	
(iii) Establishment of reporting systems for acquiring emission data from the relevant sectors (art. 6)				
Art. 6	Reporting 1. By 31 March 2008 and every year thereafter, each producer, importer and exporter of fluorinated greenhouse gases shall communicate to the Commission by way of a report, sending the same information to the competent authority of the Member State concerned, the following data in respect of the preceding calendar year: (a) each producer who produces more than one tonne of fluorinated greenhouse gases per annum shall communicate: — its total production of each fluorinated greenhouse gas in the Community, identifying the main categories of applications (e.g.	Art. 14 of the ODS and F-gases law	1. Accounting of information about controlled substances, goods and equipment, waste containing controlled substances shall be mandatory for all economic entities conducting operations with controlled substances, goods and equipment. 2. Controlled substance operators importing or exporting controlled substances shall perform accounting of the data about: amount of each type of controlled substances, including as part of mixtures that have been imported, exported or placed in the Ukrainian market by them, with a separate indication of the state (primary, recovered, regenerated) and target use of the substance (use, placement in the market, neutralization, recycling, recovery, storage), information about the buyer/seller of such substance, goods and equipment (name of the legal entity, last name, name and patronymic of an individual entrepreneur, code as per EDRPOU, registration number of the taxpayer's identification card or passport series and number (for the individuals who for their religious beliefs refuse to accept the registration number of the taxpayer's identification card and have notified thereof the relevant regulatory authority and have the relevant mark in their passport), location of the legal entity or place of residence of the individual entrepreneur, last name, name and patronymic, job title of the head of the enterprise, contact telephone number	**Transposed** The production of F-gases in Ukraine is absent and prohibited by virtue of Article 6 of the ODS and F-gases law.[21] In addition, unlike the F-gases Regulation the ODS and F-gases Law imposes reporting obligations on all operators of controlled substances irrespectively of their annual quantities. Necessary secondary legislation for implementing the ODS and F-gases law, including, inter alia, a Procedure for conducting the reporting by operators of

[21] Article 1 of the ODS and F-gases Law : 2) producer of controlled substances - natural person - entrepreneur or legal entity that performs production of controlled substances on the territory of Ukraine; 3) production of controlled substances - activity involving all stages of the technological process and related to the release of controlled substances, whether intentionally or unintentionally, or as a by-product, if such by-product is not disposed of as part of the process. Recycling of controlled substances, recovery for the purpose of recycling, production of mixtures of controlled substances are not considered as production.
Article 6 of the the ODS and F-gases Law: 1. The production of controlled substances in Ukraine is prohibited.

	mobile air-conditioning, refrigeration, air - conditioning, foams, aerosols, electrical equipment, semi - conductor manufacture, solvents and fire protection) in which the substance is expected to be used, — the quantities of each fluorinated greenhouse gas it has placed on the market in the Community, — any quantities of each fluorinated greenhouse gas recycled, reclaimed or destroyed; (b) each importer who imports more than one tonne of fluorinated greenhouse gases per annum, including any producers who also import, shall communicate: — the quantity of each fluorinated greenhouse gas it has imported or placed on the market in the Community, separately identifying the main categories of applications (e.g. mobile air - conditioning, refrigeration, air-conditioning, foams, aerosols, electrical equipment, semi-conductor manufacture) in which the substance is expected to be used, — any quantities of each used fluorinated greenhouse gas it has imported for recycling, for reclamation or for destruction; (c) each exporter who exports more than one tonne of fluorinated greenhouse gases per annum, including any producers who also export, shall communicate: — the quantities of each fluorinated greenhouse gas it has		and e-mail address); residues of controlled substances of each type at the end of the year. 3. Controlled substance operators carrying out the activities of controlled substance use shall ensure accounting: of the amount as per types of controlled substances added during installation, performance of current repairs, technical maintenance or as a result of leakage; of the amount of accumulated recovered controlled substances; of the facts of use of recycled or regenerated controlled substance and amount thereof, as well as names and addresses of economic entities handling controlled substances; of equipment and amount of controlled substances contained therein; of dates and results of conducting inspections for the presence of controlled substance leakages; of amount and state of accumulated controlled substances during maintenance, repairs and final disposal of equipment; of information about the individual (last name, name and patronymic, job title, qualification document (certificate) number) that has performed works for the installation, maintenance, technical maintenance, repair, decommissioning of equipment, inspection for the presence of leakages, recovery, neutralization of controlled substances. 4. Controlled substance operators handling controlled substances shall keep accounting of the data about the amount of each type of controlled substance that have been recovered, recycled, regenerated or neutralized. 5. Accounting of the information about waste containing controlled substances shall be mandatory for all economic entities conducting operations with waste containing controlled substances.	controlled substances supplied, is expected to be developed and adopted within 6 months from the entry into force of the ODS and F-gases law.
		Art. 15 of ODS and F-gases law	1. The information accounted in accordance with this Law [see Article above] shall be stored by the operator of controlled substances for at least five years from the date of creation of such information and shall be provided at the request of the central body of executive power that ensures the formation of state policy in the field of environmental protection and ecological safety, and the central body of executive power implementing the state policy on state supervision (control) in the field of environmental protection, rational implementation growth, reproduction and conservation of natural resources. 2. Operators of controlled substances carrying out operations with controlled substances are obliged to submit annually to a central executive body that ensures the formation of state policy in the field of environmental protection and ecological safety, reporting in the manner established by such body. 3. Information on the import/export of controlled substances, goods and equipment shall be submitted monthly and annually by the central	

	exported from the Community, — any quantities of each used fluorinated greenhouse gas it has exported for recycling, for reclamation or for destruction. 2. By 4 July 2007, the Commission shall determine, in accordance with the procedure referred to in Article 12(2), the format of the reports referred to in paragraph 1 of this Article. 3. The Commission shall take appropriate steps to protect the confidentiality of the information submitted to it. 4. Member States shall establish reporting systems for the relevant sectors referred to in this Regulation, with the objective of acquiring, to the extent possible, emission data. Deadline: to be implemented within 2 years of the entry into force of the AA i.e. by 1 September 2019		executive body implementing state policy in the field of state customs, state policy in the field of combating offenses during the application of customs legislation, the central executive body, which ensures the formation of state policy in the field of environmental protection and ecological safety. 4. The central executive body responsible for the formation of state policy in the field of environmental protection and ecological safety shall submit annually the list of operators of controlled substances, the information of which has been entered in the Register, the central executive body implementing state policy in the field of public customs. affairs, state policy in the field of combating offenses during the application of customs legislation. 5. The central executive body responsible for the formulation of national environmental and environmental policies shall submit annually information on the consumption of controlled substances to the Ozone Secretariat in accordance with the requirements of Article 7 of the Montreal Protocol on Substances that Deplete the Ozone Layer.	
		Art. 3(3) and (2) of ODS and F-gases Law	3. The powers of the central body of executive power to ensure the formulation of state policy in the field of environmental protection and ecologic safety include: […] 2) establishing a procedure for: […] conducting the reporting by operators of controlled substances supplied through the customs territory of Ukraine, placing on the market, using and carrying out the treatment of controlled substances and goods;	
(iv) Establishment of an enforcement system (art. 13)				
Art. 13	Penalties 1. Member States shall lay down rules on penalties applicable to infringements of the provisions of this Regulation and shall take all measures necessary to ensure that such rules are implemented. The penalties provided for shall be effective, proportionate and dissuasive. 2. Member States shall notify the rules on penalties to the Commission by 4 July 2008 and shall also notify it without delay of any subsequent amendment	Art. 16 of the ODS and F-gases law	1. Violations of legislation on ozone-depleting substances and fluorinated greenhouse gases is subject to liability under the law. 2. Supervision over compliance with the requirements of this Law within the limits of their powers shall be exercised by the central body of executive power, which implements the state policy on the state supervision (control) in the sphere of environmental protection, rational use, reproduction and protection of natural resources, and the central body of executive power in charge for implementing state policy in the field of state customs, state policy in the field of dealing with violations in the application of customs legislation.	**Transposed**
		Art. 4 of Final and transitional provisions of the ODS	4. Introduce the following amendments to the Code of Administrative Offenses (Bulletin of the Verkhovna Rada of the USSR, 1984, supplement to No. 51, Art. 1122): amend Article 79^2 to read as follows: “Article 79^2. Violation of rules for the prevention of leakages and	

	affecting those rules. Deadline: to be implemented within 2 years of the entry into force of the AA i.e. by 1 September 2019	and F-gases law	emissions of ozone-depleting substances and fluorinated greenhouse gases Violation of the rules for the prevention of leakages and emissions of ozone-depleting substances and fluorinated greenhouse gases – entails the imposition of a fine on officials from one hundred to two hundred tax-free minimum incomes of citizens ”;	

2.4. Concluding remarks regarding the transposition of the F-gases Regulation

The recently adopted ODS and F-gases Law sets out a common legal framework for CSs (being both F-gases and ODS).

In the absence of clear definition of competent authority, it however implies from the ODS and F-gases law that the leading competent authority in the filed of F-gases is expected to be MEEP. At the same time the law clearly defines the roles, extent and level of coordination among the state authorities in the field of CSs.

The law transposes almost all of the principles and provisions of the F-gases Regulation, which are explicitly referred to in the AA. It establishes rules for national training and certification requirements for relevant personnel and companies involved in CSs activities and introduces an enforcement system for violating rules in the field of CSs.

As a positive step forward, the ODS and F-gases law lays down rules on a strong reporting system for acquiring emission data from the relevant sectors. Strict reporting rules and obligations are in place and binding on all CSs operators irrespective of their imported/exporter quantities of F-gases. Moreover, ODS and F-gases law goes beyond Ukraine's explicit commitments under the AA by envisaging the creation of a registry for CSs operators and introducing a quota for import of F-gases, including licensing requirement for their import and export.

However, necessary secondary legislation shall be in place no later than within 6 months from the entry into force of this law.

2.5. Table of Concordance of Ukraine with ODS Regulation

Country name	Ukraine
Last update:	30 January 2020
National legislation:	The Law of Ukraine "On the regulation of economic activities with ozone-depleting substances and fluorinated greenhouse gases" No. 376-IX dated 12.12.2019 [applies from 27 March 2020, except for provisions of Article 7(6) and Title IV] (hereinafter - **ODS and F-gases law**); The Law of Ukraine "On foreign economic activity" dated 16.04.1991 No. 959-XII (hereinafter – **Law on FEA**); CMU resolution "On approval of the list of goods that are subject to licensing and export and import quotas for 2020" dated 24.12.2019 No. 1109 (hereinafter – **CMU resolution No. 1109**); Ministry of ecology and natural resources of Ukraine "On approval of the procedure for approval for the import or export of ozone-depleting substances and the goods containing them" dated 02.12.2015 No. 459 (hereinafter – **Procedure for import/export of ODS**).
Remarks:	Issues that require special attention are highlighted in red.

ODS Regulation		**National legislation**		**Level of concordance / comment**
Art.	**Provision / Transposition deadline**	**Art. / Law**	**Specific provision**	
(i) Adoption of national legislation and designation of competent authority/ies				
N/A	Adoption of national legislation and designation of competent authority/ies Deadline: to be implemented within 2 years of the entry into force of the AA i.e. by 1 September 2019	Art. 3	Article 3. State administration in the field of regulation of controlled substances 1. The state administration in the field of regulation of controlled substances shall be carried out by the Cabinet of Ministers of Ukraine, the central executive body ensuring the formation of state policy in the field of environmental protection and ecological safety, the central executive body implementing the state policy in the field of environmental protection and ecological safety, the central executive body implementing the state policy on state surveillance (control) in the field of protection and the environment, the rational use, reproduction and protection of natural resources, the central body of executive power, which implements state policy in the field of state customs, state policy in the field of dealing with violations in the application of customs legislation.	**Partially transposed** The ODS and F-gases law envisages several bodies to be established in the field of CSs, whereas the leading role is to be played by MEEP. For the time being no secondary legislation is in place to designate respective authorities.
(ii) Establishment of bans for controlled substances including ending the use of virgin hydrochlorofluorocarbons by 2010 and of all hydrochlorofluorocarbons by 2020 (art. 4 and 5)				

Art. 4	Control of the placing on the market and use of controlled substances 1. Subject to paragraphs 4 and 5, the placing on the market and the use of the following controlled substances shall be prohibited: (a) chlorofluorocarbons; (b) other fully halogenated chlorofluorocarbons; (c) halons; (d) carbon tetrachloride; (e) 1,1,1-trichloroethane; and (f) hydrobromofluorocarbons; and (g) bromochloromethane. The Commission may, following a request by a competent authority of a Member State and in accordance with the procedure referred to in Article 18(2), authorise a temporary exemption to allow the use of chlorofluorocarbons until 31 December 2004 in delivery mechanisms for hermetically sealed devices designed for implantation in the human body for delivery of measured doses of medication, and until 31 December 2008, in existing military applications, where it is demonstrated that, for a particular use, technically and economically feasible alternative substances or technologies are not available or cannot be used. 2. (i) Subject to paragraphs 4 and 5, each producer and importer shall ensure that: (a) the calculated level of methyl bromide which it places on the market or uses for its own account in the period 1 January 1999 to 31 December 1999 and in each 12-month period thereafter does not exceed 75 % of the calculated level of methyl bromide which it placed on the	Art. 1(1)(9) and (13) of ODS and F-gases Law	9) controlled substances shall mean ozone-depleting substances and/or fluorinated greenhouse gases; 13) ozone-depleting substance shall mean any substance listed in Annex 1 hereto that exists independently or in a mixture, is primary, recovered, regenerated or processed for recycling, or isomers of such substance, and has an ozone-depleting potential that is higher than zero; [*For detailed list of ODS see Annex 3 to this report*]	**Partially transposed** The ODS included in the Ukrainian law fully transpose those included in the ODS Regulation. The ban on import, export and placing on the market of CSs and products, goods using them is generally in line with the requirements of ODS Regulation. However, the existing concern relates to the exemption rule. This concerns allowing importing the ODS goods and equipment for purposes of quarantine and preshipment treatment (see in red). In the light of the EU law the import of ODS equipment and products is severely restricted under the ODS Regulation, except for certain exemptions. Those exemptions are: 1) the importer must hold quota corresponding to intended import, and 2) the use must be essential as per EU Commission authorization under Article 3(1) of ODS Regulation. It is worth noting that quarantine and preshipment applications in the ODS Regulation only refers to the use of methyl bromide. While the first condition is complied with by the ODS and F-gases law, the second
		Art. 6 of ODS and F-gases Law	1. The production of controlled substances in Ukraine is prohibited.	
		Art. 7(1-3) and (6) of ODS and F-gases Law	1. Import/export of controlled substances, goods and equipment from or to the states that are not parties to the Montreal Protocol on Substances that Deplete the Ozone Layer shall be forbidden. 2. Import/export of controlled substances, goods and equipment from or to the states that are parties to the Montreal Protocol on Substances that Deplete the Ozone Layer shall be made in the procedure established by the Law of Ukraine “On Foreign Economic Activity” with the account of the specifics set forth herein. 3. Import of ozone-depleting substances, as well as fluorinated greenhouse gases listed in paragraph 1 of Annex 2 hereto shall be made subject to obtaining a share within the annual national quota for import of controlled substances. […] 6. Import and placement in the market of controlled substances in disposable containers, except for import for laboratory and analytical purposes, shall be forbidden.	
		Para 2 of Final and transitional provisions of ODS and F-gases Law	2. As of the day of entry into force of this Law, import and placing in the market of the goods and equipment containing or operating with the use of ozone-depleting substances shall be forbidden. An exception to this shall be import and placement in the market of the goods and equipment containing or operating with the use of ozone-depleting substances: which had been imported prior to entry of this Law into effect, but not placed in the market; for the purposes of quarantine and pre-shipment treatment; in special cases provided for by the decisions of the parties to the Montreal Protocol on Substances that Deplete the Ozone Layer; for the application types of utmost importance as specified by separate decisions at the meetings of the parties to the Montreal Protocol on Substances that Deplete the Ozone Layer.	
		Art. 16 of the FEA Law	Import licensing of goods is introduced in Ukraine if: […] necessary to implement Ukraine's obligations under the international	

	market or used for its own account in 1991; (b) the calculated level of methyl bromide which it places on the market or uses for its own account in the period 1 January 2001 to 31 December 2001 and in each 12-month period thereafter does not exceed 40 % of the calculated level of methyl bromide which it placed on the market or used for its own account in 1991; (c) the calculated level of methyl bromide which it places on the market or uses for its own account in the period 1 January 2003 to 31 December 2003 and in each 12-month period thereafter does not exceed 25 % of the calculated level of methyl bromide which it placed on the market or used for its own account in 1991; (d) it does not place any methyl bromide on the market or use any for its own account after 31 December 2004. To the extent permitted by the Protocol, the Commission shall, following a request by a competent authority of a Member State and in accordance with the procedure referred to in Article 18(2), adjust the calculated level of methyl bromide referred to in Article 3(2) (i) (c) and subparagraph (c) where it is demonstrated that this is necessary to meet the needs of that Member State, because technically and economically feasible alternatives or substitutes that are acceptable from the standpoint of environment and health are not available or cannot be used. The Commission, in consultation with Member States, shall encourage the		treaties; […] The decision on the application of the licensing regime to export (import) of goods, including the setting of quotas (quantitative or other restrictions), is made by the Cabinet of Ministers of Ukraine upon the submission of the central executive body, which ensures the formation and implementation of state policy in the field of economic development, with the definition of a list of specific the goods whose exports (imports) are subject to licensing, the period of validity of the licensing and the quantitative or other restrictions on each product. […] Customs clearance of goods licensed and in bulk shall not be refused where the value, quantity or weight of such goods is insignificantly different from those specified in the license. The marginal difference of such values is established by the Cabinet of Ministers of Ukraine upon the submission of the central executive body, which ensures the formation and implementation of state policy in the sphere of economic development.	is not. Thus, legislative changes are required.
		Para 1(2) and (3) and 2 of CMU resolution No. 1109	CMU establishes to : 1. Approve for 2020 : […] 2) the list of goods (ozone-depleting substances), the export and import of which are subject to licensing, in accordance with Annex 2; 3) the list of goods which may contain ozone-depleting substances, the export and import of which are subject to licensing (except goods carried in containers of personal effects), in accordance with Annex 3. […] 2. Determine that: 1) license for export (import) of goods specified in the resolution of the Cabinet of Ministers of Ukraine of 27 December 2018 № 1136 “On approving the lists of goods, exports and imports of which are subject to licensing, and quotas for 2019 ”(Official Gazette of Ukraine, 2019, No. 4, Article 125), not used in 2019 by the subjects of foreign economic activity are valid until March 1, 2020, unless otherwise provided by the relevant international treaties of Ukraine; 2) in accordance with Article 16 of the Law of Ukraine "On Foreign Economic Activity" for customs clearance of goods, the export (import) of which is licensed, the limit difference of their actual value, quantity or weight may not exceed 5 percent of the value recorded in the relevant license . 3. To note, that in accordance with the requirements of the Montreal Protocol on Substances that Deplete the Ozone Layer (hereinafter referred to as the Montreal Protocol), the export (import) of goods (ozone-depleting substances) or goods which may contain such substances are specified in Annexes 2 and 3 and shall be made only to Contracting Parties to the	

	development, including research, and the use of alternatives to methyl bromide as soon as possible. (ii) Subject to paragraph 4, the placing on the market and the use of methyl bromide by undertakings other than producers and importers shall be prohibited after 31 December 2005. (iii) The calculated levels referred to in subparagraphs (i) (a), (b), (c) and (d) and (ii) shall not include the amount of methyl bromide produced or imported for quarantine and preshipment applications. For the period 1 January 2001 to 31 December 2001 and for each 12-month period thereafter, each producer and importer shall ensure that the calculated level of methyl bromide which it places on the market or uses for its own account for quarantine and preshipment applications shall not exceed the average of the calculated level of methyl bromide which it placed on the market or used for its own account for quarantine and preshipment in the years 1996, 1997 and 1998. Each year Member States shall report to the Commission the quantities of methyl bromide authorised for quarantine and preshipment used in their territory, the purposes for which methyl bromide was used, and the progress in evaluating and using alternatives. The Commission shall take measures to reduce the calculated level of methyl bromide which producers and importers may place on the market or use for their own account for quarantine and preshipment in the light of technical and economic availability of alternative substances or technologies, and of the relevant		Montreal Protocol.	

	international developments under the Protocol. Those measures, designed to amend non-essential elements of this Regulation by supplementing it, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 18(3). (iv) The total quantitative limits for the placing on the market or use for their own account by producers and importers of methyl bromide are set out in Annex III. 3. (i) Subject to paragraphs 4 and 5 and to Article 5(5): (a) the calculated level of hydrochlorofluorocarbons which producers and importers place on the market or use for their own account in the period 1 January 1999 to 31 December 1999 and in the 12-month period thereafter shall not exceed the sum of: — 2,6 % of the calculated level of chlorofluorocarbons which producers and importers placed on the market or used for their own account in 1989, and — the calculated level of hydrochlorofluorocarbons which producers and importers placed on the market or used for their own account in 1989; (b) the calculated level of hydrochlorofluorocarbons which producers and importers place on the market or use for their own account in the period 1 January 2001 to 31 December 2001 shall not exceed the sum of: — 2,0 % of the calculated level of chlorofluorocarbons which producers and importers placed on the market or used for their own account in 1989, and			

	— the calculated level of hydrochlorofluorocarbons which producers and importers placed on the market or used for their own account in 1989; (c) the calculated level of hydrochlorofluorocarbons which producers and importers place on the market or use for their own account in the period 1 January 2002 to 31 December 2002 shall not exceed 85 % of the level calculated pursuant to subparagraph (b); (d) the calculated level of hydrochlorofluorocarbons which producers and importers place on the market or use for their own account in the period 1 January 2003 to 31 December 2003 shall not exceed 45 % of the level calculated pursuant to subparagraph (b); (e) the calculated level of hydrochlorofluorocarbons which producers and importers place on the market or use for their own account in the period 1 January 2004 to 31 December 2004 and in each 12-month period thereafter shall not exceed 30 % of the level calculated pursuant to subparagraph (b); (f) the calculated level of hydrochlorofluorocarbons which producers and importers place on the market or use for their own account in the period 1 January 2008 to 31 December 2008 and in each 12-month period thereafter shall not exceed 25 % of the level calculated pursuant to subparagraph (b); (g) producers and importers shall not place hydrochlorofluorocarbons on the market or use them for their own account after 31 December 2009; (h) each producer and importer shall			

	ensure that the calculated level of hydrochlorofluorocarbons which it places on the market or uses for its own account in the period 1 January 2001 to 31 December 2001 and in the 12-month period thereafter shall not exceed, as a percentage of the calculated levels set out in (a) to (c), the percentage share assigned to it in 1999 (i) by way of derogation from point (h), each producer and importer in the Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Slovenia and Slovakia shall ensure that the calculated level of hydrochlorofluorocarbons which it places on the market or uses for its own account shall not exceed, as a percentage of the calculated levels set out in points (b), (d), (e) and (f), the average of its percentage market share in 2002 and 2003; (ii) Before 1 January 2001, the Commission shall, in accordance with the procedure referred to in Article 18(2), determine a mechanism for the allocation of quotas to each producer and importer of the calculated levels set out in (d) to (f), applicable for the period 1 January 2003 to 31 December 2003 and for each 12-month period thereafter. (iii) In the case of producers, the quantities referred to in this paragraph shall apply to the amounts of virgin hydrochlorofluorocarbons which they place on the market or use for their own account within the Community and which were produced in the Community; (iv) The total quantitative limits for the placing on the market or use for their own account by producers and			

	importers of hydrochlorofluorocarbons are set out in Annex III. 4. (i) (a) Paragraphs 1, 2 and 3 shall not apply to the placing on the market of controlled substances for destruction within the Community by technologies approved by the Parties; (b) paragraphs 1, 2 and 3 shall not apply to the placing on the market and use of controlled substances if: — they are used for feedstock or as a processing agent; or — they are used to meet the licensed requests for essential uses of those users identified as laid down in Article 3(1) and to meet the licensed requests for critical uses of those users identified as laid down in Article 3(2) or to meet the requests for temporary emergency applications authorised in accordance with Article 3(2) (ii). (ii) Paragraph 1 shall not apply to the placing on the market, by undertakings other than producers, of controlled substances for the maintenance or servicing of refrigeration and air-conditioning equipment until 31 December 1999. (iii) Paragraph 1 shall not apply to the use of controlled substances for the maintenance or servicing of refrigeration and air-conditioning equipment or in fingerprinting processes until 31 December 2000. (iv) Paragraph 1(c) shall not apply to the placing on the market and use of halons that have been recovered, recycled or reclaimed in existing fire protection systems until 31 December 2002 or to the placing on the market and use of halons for critical uses as set out in Annex VII. Each year the competent authorities of the Member			

	States shall notify to the Commission the quantities of halons used for critical uses, the measures taken to reduce their emissions and an estimate of such emissions, and the current activities to identify and use adequate alternatives. Each year the Commission shall review the critical uses listed in Annex VII and, if necessary, adopt modifications and, where appropriate, time-frames for phase-out, taking into account the availability of both technically and economically feasible alternatives or technologies that are acceptable from the standpoint of environment and health, in accordance with the procedure referred to in Article 18(2)." [In the version of Regulation (EC) No 1804/2003 of the European Parliament and of the Council of 22 September 2003 amending Regulation (EC) No 2037/2000 as regards the control of halon exported for critical uses, the export of products and equipment containing chlorofluorocarbons and controls on bromochloromethane][22] (v) Except for uses listed in Annex VII, fire protection systems and fire extinguishers containing halons shall be decommissioned before 31 December 2003, and halons shall be recovered in accordance with Article 16. 5. Any producer or importer entitled to place controlled substances referred to in this Article on the market or use them for its own account may transfer that right in			

[22] Regulation (EC) No 1804/2003 of the European Parliament and of the Council of 22 September 2003 amending Regulation (EC) No 2037/2000 as regards the control of halon exported for critical uses, the export of products and equipment containing chlorofluorocarbons and controls on bromochloromethane available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32003R1804

	respect of all or any quantities of that group of substances fixed in accordance with this Article to any other producer or importer of that group of substances within the Community. Any such transfer shall be notified in advance to the Commission. The transfer of the right to place on the market or use shall not imply the further right to produce or to import. 6. The importation and placing on the market of products and equipment containing chlorofluorocarbons, other fully halogenated chlorofluorocarbons, halons, carbon tetrachloride, 1,1,1-trichloroethane, hydrobromofluorocarbons and bromochloromethane shall be prohibited, with the exception of products and equipment for which the use of the respective controlled substance has been authorised in accordance with the second subparagraph of Article 3(1) or is listed in Annex VII. Products and equipment shown to be manufactured before the entry into force of this Regulation shall not be covered by this prohibition. Deadline: to be implemented within 2 years of the entry into force of the AA i.e. by 1 September 2019			
Art. 5	Control of the use of hydrochlorofluorocarbons 1. Subject to the following conditions, the use of hydrochlorofluorocarbons shall be prohibited: (a) in aerosols; (b) as solvents: (i) in non-contained solvent uses including open-top cleaners and		None	**Not transposed** HCFCs fall under the scope of CSs within the meaning of this law. Unlike for the import/export and placing in the market of CSs, the usage and of HCFCs, including virgin

	open-top dewatering systems without refrigerated areas, in adhesives and mould-release agents when not employed in closed equipment, for drain cleaning where hydrochlorofluorocarbons are not recovered; (ii) from 1 January 2002, in all solvent uses, with the exception of precision cleaning of electrical and other components in aerospace and aeronautics applications where the prohibition shall enter into force on 31 December 2008; (c) as refrigerants: (i) in equipment produced after 31 December 1995 for the following uses: — in non-confined direct-evaporation systems, — in domestic refrigerators and freezers, — in motor vehicle, tractor and off-road vehicle or trailer air conditioning systems operating on any energy source, except for military uses where the prohibition shall enter into force on 31 December 2008, — in road public-transport air-conditioning, (ii) in rail transport air-conditioning, in equipment produced after 31 December 1997; (iii) from 1 January 2000, in equipment produced after 31 December 1999 for the following uses: — in public and distribution cold stores and warehouses, — for equipment of 150 kw and over, shaft input, (iv) from 1 January 2001, in all other refrigeration and air-conditioning equipment produced after 31			HCFCs, is not explicitly prohibited by the ODS and F-gases law.

	December 2000, with the exception of fixed air-conditioning equipment, with a cooling capacity of less than 100 kW, where the use of hydrochlofluorocarbons shall be prohibited from 1 July 2002 in equipment produced after 30 June 2002 and of reversible air-conditioning/heat pump systems where the use of hydrochlorofluorocarbons shall be prohibited from 1 January 2004 in all equipment produced after 31 December 2003; (v) from 1 January 2010, the use of virgin hydrochlorofluorocarbons shall be prohibited in the maintenance and servicing of refrigeration and air-conditioning equipment existing at that date; all hydrochlorofluorocarbons shall be prohibited from 1 January 2015. Before 31 December 2008 the Commission shall review the technical and economic availability of alternatives to recycled hydrochlorofluorocarbons. The review shall take into account the availability of technically and economically feasible alternatives to hydrochlorofluorocarbons in existing refrigeration equipment with the view to avoiding undue abandonment of equipment. Alternatives for consideration should have a significantly less harmful effect on the environment than hydrochlorofluorocarbons. The Commission shall submit the result of the review to the European Parliament and to the Council. It shall, as appropriate, take a decision on whether to adapt the date of 1 January 2015. That measure,			

	designed to amend non-essential elements of this Regulation, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 18(3). (d) for the production of foams: (i) for the production of all foams except integral skin foams for use in safety applications and rigid insulating foams; (ii) from 1 October 2000, for the production of integral skin foams for use in safety applications and polyethylene rigid insulating foams; (iii) from 1 January 2002, for the production of extruded polystyrene rigid insulating foams, except where used for insulated transport; (iv) from 1 January 2003, for the production of polyurethane foams for appliances, of polyurethane flexible faced laminate foams and of polyurethane sandwich panels, except where these last two are used for insulated transport; (v) from 1 January 2004, for the production of all foams, including polyurethane spray and block foams; (e) as carrier gas for sterilisation substances in closed systems, in equipment produced after 31 December 1997; (f) in all other applications. 2. By way of derogation from paragraph l, the use of hydrochlorofluorocarbons shall be permitted: (a) in laboratory uses, including research and development; (b) as feedstock; (c) as a processing agent. 3. By way of derogation from paragraph 1, the use of hydrochlorofluorocarbons as fire-			

	fighting agents in existing fire protection systems may be permitted for replacing halons in applications listed in Annex VII under the following conditions: — halons contained in such fire protection systems shall be replaced completely, — halons withdrawn shall be destroyed, — 70 % of the destruction costs shall be covered by the supplier of the hydrochlorofluorocarbons, — each year, Member States making use of this provision shall notify to the Commission the number of installations and the quantities of halons concerned. 4. The importation and placing on the market of products and equipment containing hydrochlorofluorocarbons for which a use restriction is in force under this Article shall be prohibited from the date on which the use restriction comes into force. Products and equipment shown to be manufactured before the date of that use restriction shall not be covered by this prohibition. 5. Until 31 December 2009, the use restrictions under this Article shall not apply to the use of hydrochlorofluorocarbons for the production of products for export to countries where the use of hydrochlorofluorocarbons in those products is still permitted. 6. The Commission may, in accordance with the procedure referred to in Article 18(2), in the light of experience with the operation of this Regulation or to reflect technical progress, modify the list and the dates set out in paragraph 1, but in no case			

	extend the periods set out therein, without prejudice to the exemptions provided for in paragraph 7. 7. The Commission may, following a request by a competent authority of a Member State and in accordance with the procedure referred to in Article 18(2), authorise a time-limited exemption to allow the use and placing on the market of hydrochlorofluorocarbons in derogation from paragraph 1 and Article 4(3) where it is demonstrated that, for a particular use, technically and economically feasible alternative substances or technologies are not available or cannot be used. The Commission shall immediately inform the Member States of any exemptions granted. Deadline: to be implemented within 2 years of the entry into force of the AA i.e. by 1 September 2019			
(iii) Establishment of a quantitative limit for the use of methyl bromide for quarantine and pre-shipment applications at the level of the average use in the years 1996, 1997 and 1998 (art. 4) by 1 September 2019				
Art. 4	[See full Article above] […] For the period 1 January 2001 to 31 December 2001 and for each 12-month period thereafter, each producer and importer shall ensure that the calculated level of methyl bromide which it places on the market or uses for its own account for quarantine and preshipment applications shall not exceed the average of the calculated level of methyl bromide which it placed on the market or used for its own account for quarantine and preshipment in the years 1996, 1997 and 1998. […] Deadline: to be implemented within 2 years of the entry into force of the AA	Art. 7(7)	7. From 1 January of the year following the entry into effect of this Law and every subsequent 12-month period each controlled substance operator importing controlled substances shall ensure calculated level of methyl bromide that it places on the market or uses for its own needs for the purposes of quarantine and preshipment treatment, which does not exceed the average of the calculated level of methyl bromide which it placed on the market or used for its own account for the purposes of quarantine and preshipment treatment in the years of 1996-1998.	**Transposed**

	i.e. by 1 September 2019			
(iv) Phasing out of the placing on the market of virgin hydrochlorofluorcarbons by 2015 (art. 4)				
Art. 4	[See above paragraph 3 of Article 4] Deadline: to be implemented within 2 years of the entry into force of the AA i.e. by 1 September 2019	Para 3 of Title VII Final and transitional provisions of ODS and F-gases Law	As of 1 January 2021, placing on the market of virgin ozone-depleting substances shall be forbidden.	**Transposed** According to Annex I to the ODS and F-gases law HCFCs fall under the scope of ODS within the meaning of this law and are in line with ODS list annexed to the ODS Regulation.
(v) Establishment of obligations to recover, recycle, reclaim and destruct used controlled substances (Art. 16)				
Art. 16	CHAPTER IV EMISSION CONTROL Article 16 Recovery of used controlled substances 1. Controlled substances contained in: — refrigeration, air-conditioning and heat pump equipment, except domestic refrigerators and freezers, — equipment containing solvents, — fire protection systems and fire extinguishers, shall be recovered for destruction by technologies approved by the Parties or by any other environmentally acceptable destruction technology, or for recycling or reclamation during the servicing and maintenance of equipment or before the dismantling or disposal of equipment. 2. Controlled substances contained in domestic refrigerators and freezers shall be recovered and dealt with as provided for in paragraph 1 after 31 December 2001. 3. Controlled substances contained in products, installations and equipment other than those mentioned in	Art. 8(1)	1. Controlled substances contained in refrigeration equipment, air conditioning and heat pump equipment, equipment containing solvents on the basis of controlled substances, fire protection systems and fire extinguishers, high-voltage switchgears shall be subject to recovery to ensure recycling, regeneration or destruction thereof. Recovery of controlled substances for the purpose of recycling, regeneration or destruction thereof shall take place prior to decommissioning of equipment, during technical maintenance and operation thereof.	**Transposed**
		Art. 9	1. Destruction of controlled substances shall only be performed with the use of the technologies the list and procedure of the use of which are established by the central executive authority ensuring formation of state policy in the area of environmental protection and ecologic safety. 2. Decommissioning, reinstallation and destruction of the goods and equipment shall only be performed upon recovery and transfer of controlled substances for recycling, regeneration or neutralization.	

	paragraphs 1 and 2 shall be recovered, if practicable, and dealt with as provided in paragraph 1. 4. Controlled substances shall not be placed on the market in disposable containers, except for essential uses. 5. Member States shall take steps to promote the recovery, recycling, reclamation and destruction of controlled substances and shall assign to users, refrigeration technicians or other appropriate bodies responsibility for ensuring compliance with the provisions of paragraph 1. Member States shall define the minimum qualification requirements for the personnel involved. By 31 December 2001 at the latest, Member States shall report to the Commission on the programmes related to the above qualification requirements. The Commission shall evaluate the measures taken by the Member States. In the light of this evaluation and of technical and other relevant information, the Commission, as appropriate, shall propose measures regarding those minimum qualification requirements. 6. Member States shall report to the Commission by 31 December 2001, and for each 12-month period thereafter, on the systems established to promote the recovery of used controlled substances, including the facilities available and the quantities of used controlled substances recovered, recycled, reclaimed or destroyed. 7. This Article shall be without prejudice to Council Directive 75/442/EEC of 15 July 1975 on waste (8) or to measures adopted following			

	Article 2(2) of that Directive. Deadline: to be implemented within 2 years of the entry into force of the AA i.e. by 1 September 2019			
(vi) Establishment of procedures for monitoring and inspecting leakages of CSs (Art. 17)				
Art. 17	Article 17 Leakages of controlled substances 1. All precautionary measures practicable shall be taken to prevent and minimise leakages of controlled substances. In particular, fixed equipment with a refrigerating fluid charge of more than 3 kg shall be checked for leakages annually. Member States shall define the minimum qualification requirements for the personnel involved. By 31 December 2001 at the latest, Member States shall report to the Commission on the programmes related to the above qualification requirements. The Commission shall evaluate the measures taken by the Member States. In the light of this evaluation and of technical and other relevant information, the Commission, as appropriate, shall propose measures regarding those minimum qualification requirements. The Commission shall promote the preparation of European standards relating to the control of leakages and to the recovery of substances leaking from commercial and industrial air-conditioning and refrigeration equipment, from fire-protection systems and from equipment containing solvents as well as, as appropriate, to technical requirements with respect to the leakproofness of refrigeration systems.	Art. 8 (2) and (3) of ODS and F-gases law	2. […] In the event of detection of leakages of controlled substances, controlled substance operators shall undertake efforts to ensure immediate elimination thereof within the period not exceeding 14 days. 3. Controlled substance operators shall ensure for the stationary equipment or systems containing ozone-depleting substances: with the weight of 3 kg or more – undergoing an inspection for the presence of a leakage at least once a year (this requirement shall not extend to the equipment with hermetically sealed systems marked with the information about the presence of a hermetically sealed system and which contain less than 6 kg of ozone-depleting substances); with the weight of 30 kg or more – undergoing an inspection for the presence of a leakage at least once in six months; with the weight of 300 kg and more – undergoing an inspection for the presence of a leakage at least once in three months and installation of a leakage detection system. 4. During the operation of stationary refrigeration equipment, air conditioning systems and heat pumps, including circuits thereof, as well as fire protection systems containing fluorinated greenhouse gases, controlled substance operators shall ensure inspections for the presence of leakages (hermetic seal): of the equipment containing fluorinated greenhouse gases in the amount from 5 to 50 tons of CO_2 equivalent (to be inspected not less than once in 12 months, and in the presence of a leakage detection system – not less than once in 24 months); of the equipment containing fluorinated greenhouse gases in the amount from 50 to 500 tons of CO_2 equivalent (to be inspected not less than once in 6 months, and in the presence of a leakage detection system – not less than once in 12 months); of the equipment containing fluorinated greenhouse gases in the amount of at least 500 tons of CO_2 equivalent (to be inspected not less than once in three months and shall be equipped with a leakage detection system). 5. The equipment shall be additionally inspected for the presence of a leakage within the period of one month upon leakage repair. The inspection for the presence of leakages shall be carried out by individuals that have undergone training and obtained a qualification document (certificate)	**Transposed**

	2. All precautionary measures practicable shall be taken to prevent and minimise leakages of methyl bromide from fumigation installations and operations in which methyl bromide is used. Whenever methyl bromide is used in soil fumigation, the use of virtually impermeable films for a sufficient time, or other techniques ensuring at least the same level of environmental protection shall be mandatory. Member States shall define the minimum qualification requirements for the personnel involved. 3. All precautionary measures practicable shall be taken to prevent and minimise leakages of controlled substances used as feedstock and as processing agents. 4. All precautionary measures practicable shall be taken to prevent and minimise any leakage of controlled substances inadvertently produced in the course of the manufacture of other chemicals. 5. The Commission shall develop as appropriate and ensure the dissemination of notes describing best available technologies and best environmental practices concerning the prevention and minimisation of leakages and emissions of controlled substances. <u>Deadline:</u> to be implemented within 2 years of the entry into force of the AA i.e. by 1 September 2019		according to Articles 10, 11 hereof. 6. In the event that the operation lifetime of a disposable or reusable container expires, controlled substance operators using such container for the purposes of transportation or storage of controlled substances shall undertake to ensure proper recovery of any residues of controlled substances contained therein to ensure recycling, regeneration or neutralization thereof. 7. Economic entities shall have the right to provide services for maintenance of the goods and equipment, recycling, regeneration, neutralization, inspection for the presence of leakages of controlled substances, provided that there are individuals on the staff of such legal entity who have obtained a qualification document (certificate) according to Article 11 hereof. Maintenance works for the goods and equipment may only be performed by the individuals who have obtained a qualification document (certificate) to conduct such activities.	

2.6. Concluding remarks regarding the transposition of the ODS Regulation

The ODS and F-gases law sets out a regulatory framework for production, importation, exportation, placing in the market and use of the ODS, including products and equipment with ODS. It is to be noted that the law fully transposes the list of ODS as annexed to the ODS Regulation.

In the absence of clear definition of competent authority, it implies from the ODS and F-gases Law, that these will be the MEEP. The sufficient rules on the level and extent of its coordination with other state bodies in the field of ODS are also in place.

In compliance with the ODS Regulation the Ukrainian law prohibits the production of CSs and imposes a ban on import, export and placing on the market of CSs, including products and goods using them. Necessary rules are in place for monitoring and inspecting leakages of CSs. Obligation to recover, recycle, reclaim and destruct used CSs is also enshrined in the law. The ODS and F-gases law fully transposes requirements on quantitative limits for the use of methyl bromide for quarantine and pre-shipment applications as stipulated in the ODS Regulation.

However, Ukraine should address incompliances concerning the importing of ODS goods and equipment for purposes of quarantine and pre-shipment treatment as well as ending the use of virgin and all HCFCs in line with Art. 5 of the ODS Regulation.

It is to be reminded that in the light of severe import restriction existing in the EU as for ODS-related equipment and products, exemptions are only allowed subject to strict conditions. It is worth noting that “quarantine and preshipment applications” is not considered as an exemption condition within the meaning of EU legislation on ODS. Instead, quarantine and preshipment applications in the ODS Regulation are only referred as to the use of methyl bromide.

Also, the ODS and F-gases law lacks compliance with Art. 5 of the ODS Regulation as no clear and explicit rules are in place for ending the use of virgin HCFCs [as indicated in the AA - by 2010] and all HCFCs [as indicated in the AA - by 2020].

Therefore, amendments to the ODS and F-gases Law are needed to remove incompliances.

3. Compliance review and gap analysis of the national legislative framework of Ukraine vis-à-vis climate *acquis* under the Energy Community Treaty

As a Contracting Party to Energy Community Treaty (EnCT) Ukraine is committed to transpose and implement provisions of the EU legislation made applicable under it.[23] Climate-related provisions in the Energy Community (EnC) consist of recommendations and guidelines adopted at the level of EnC Ministerial Council (MC). The recommendations have no binding legal force, though CPs "shall use their best endeavours" to carry them out.[24]

For the time being, the climate-related *acquis* consist of: *1) Recommendation 2016/02/MC-EnC; 2) Recommendation 2018/01/MC-EnC, including Policy Guidelines (PG 03/2018) on the development of NECPs; and 3) General Policy Guidelines on the 2030 targets.* According to *Recommendation 2016/02/MC-EnC* Ukraine is encouraged to "prepare legal and institutional preconditions" in order to implement key elements of Regulation (EU) 525/2013 on a mechanism for monitoring and reporting GHG emissions, which is planned to become a fully binding part of climate *acquis* under EnCT following its adaptation. In line with *Recommendation 2018/01/MC-EnC,* as part of climate reporting, Ukraine should strive to prepare and submit by 2020 its National Energy and Climate Plan (NECP) addressing five key EU dimensions.[25] The *Policy Guidelines (PG 03/2018) on the development of NECP* is also to be considered in course of preparation of the NECP.[26] As per the *General Policy Guidelines on the 2030 targets,* Ukraine should establish three separate energy and climate targets.[27]

The section below seeks to establish gaps in the Ukrainian legislation while transposing the above-mentioned *acquis* in line with Ukraine's obligations under the EnCT in the form of concordance table with explanations thereto. In the concordance table:

- "**Transposed"** shall mean full transposition of the respective EU climate *acquis* has taken place;
- "**Partially transposed**" shall mean partial transposition of the respective EU climate *acquis* supplemented by a comment and explanation thereto. Draft legislation can also be meant to be marked as "partially transposed";
- "**Not transposed**" shall mean failure to transpose of the respective EU climate *acquis* supplemented by a comment and explanation thereto;
- "**No transposition required**" shall mean absence of need to transpose the respective EU climate *acquis* as supplemented by a comment and explanation thereto;
- Issues that require special attention are highlighted in red.

[23] Ukraine became a Contracting Party to Energy Community Treaty (EnCT) as of 1 February 2011.
[24] Article 76 of EnCT.
[25] Five EU dimensions include : (1) Security, solidarity and trust; (2) A fully integrated internal energy market; (3) Energy efficiency; (4) Decarbonizing the economy; and (5) Research, innovation and competitiveness.
[26] Adopted at Ministerial Council as Annex 17/16th MC/23-11-2018.
[27] Namely targets for: (1) energy efficiency, (2) contribution of renewable energy sources, and a (3) GHG emission reduction target.

3.1. Table of Concordance of Ukraine with Recommendation 2016/02/MC-EnC, Recommendation 2018/01/MC-EnC and Policy Guidelines PG 03/2018

Country name	Ukraine
Last update:	30 January 2020
National legislation:	CMU decree "On approval of procedure of operation of national anthropogenic emission assessment and absorption system for greenhouse gases not controlled by the Montreal Protocol on Substances that deplete the ozone layer" dated 21 April 2006 No. 554 (hereinafter - **Procedure for GHG Accounting**); CMU decree "On establishment of budget institution "National Center for GHG Accounting" of 7 November 2011 No. 1194-r (hereinafter – **Decree on National Center for GHG**); CMU decree "On the formation and maintenance of national electronic registry of anthropogenic emissions and removals of greenhouse gases" of 28 May 2008 No. 504 (hereinafter - **Decree on GHG Accounting**); Presidential Decree "On urgent measures to reform and strengthen the state" dated 8.11.2019 No. 837/2019 (hereinafter – **Presidential Decree No. 837/2019**); CMU decision "On Approval of Action Plan on implementation of Concept of realization of state policy in the area of climate change for the period up to 2030" dated 6 December 2017 No. 878 (hereinafter - **2030 Climate Change Concept Action Plan**) CMU resolution as of 18.08.2017 No. 605-r "On approval of the Energy Strategy of Ukraine for the period up to 2035 "Security, energy efficiency, competitiveness" (hereinafter – **Energy Strategy 2035**) The Law of Ukraine "On Monitoring, Reporting and Verification of GHG Emissions" dated 12.12.2019 No. 377-IX [enters into force on 26 March 2020 and applies from 1 January 2021] (hereinafter – **MRV law**) The Law of Ukraine "On the regulation of economic activities with ozone-depleting substances and fluorinated greenhouse gases" No. 376-IX dated 12.12.2019 [applies from 27 March 2020, except for provisions of Article 7(6) and Title IV] (hereinafter – **the ODS law and F-gases law**)
Remarks:	Issues that require special attention are highlighted in red.

		National legislation		Level of concordance / comment
Art.	**Provision / Transposition deadline**	**Art. / Law**	**Specific provision**	
1) Recommendation 2016/02/MC-EnC				
Art. 1	The Contracting Parties should prepare legal and institutional preconditions for the implementation of core elements of Regulation (EU) 525/2013 in their jurisdictions.	Para 1 of Procedure for GHG Accounting	1. […] National system for estimation of anthropogenic emissions and removals of greenhouse gases (hereinafter - the national system) is a system of organizational and technical measures for monitoring, collecting, processing, transfer and storage of information necessary for estimation of anthropogenic emissions and removals of	**Partially transposed** As per the "core elements" of Regulation (EU) 525/2013 Ukraine has: *(1) a national inventory system for GHG*

	Deadline: No specific deadline		greenhouse gases.	*emissions* in place; the legal preconditions exist for monitoring, reporting and verification registry of GHG emissions under the MRV law, whereas, a registry of CSs operators and a reporting system on CS is planned to be set up under ODS and F-gases law; *(2)* Ukraine has a *2050 Low Emission Development Strategy (2050 LEDS)*[28] approved by minutes of meeting of CMU as of 18.07.2018; (3) however no *legal basis for defining national systems for policies, measures and projections* is in place to be in line with Regulation 525/201 as most of climate-related policies and strategies are fragmented among action plans adopted at the level of secondary legislation.
		Para 1 of Decree on GHG Accounting	1. National electronic registry of anthropogenic emissions and greenhouse gas absorption is an automated accounting system and processing information on anthropogenic emissions and removals of greenhouse gases (hereinafter referred to as the Register).	
		Decree on National Center for GHG	[On establishment of budget institution "National Center for GHG Accounting"]	
		Art. 1(1)(7) of MRV law	7) Single registry for monitoring, reporting and verification of greenhouse gas emissions (hereinafter referred to as the "Unified Register") - a single state electronic information system that ensures the collection, accumulation, processing and accounting of information on installations and documents in the field of monitoring, reporting and verification of greenhouse gas emissions;	
		Art. 4 of F-gases and ODS law	1. Only natural persons - entrepreneurs or legal entities that have acquired the status of operators of controlled substances by entry in the Registry - are allowed to conduct operations with controlled substances. 2. The registry is an automated system for collecting, storing and recording data on operators of controlled substances, persons who have received qualification documents (certificates) in accordance with Article 11 of this Law.	
		Para 2(2) of 2030 Climate Change Concept Action Plan	2) Approval of the Low Carbon Development Strategy of Ukraine until 2030 […] Timeline: 2018	
		Para 2(10) of 2030 Climate Change Concept Action Plan	10) Approval of National adaptation strategy to climate change for the year of 2030	

[28] Approved by minutes of meeting of CMU as of 18.07.2018, the Ukraine's 2050 Low Emission Development Strategy available at: https://unfccc.int/sites/default/files/resource/Ukraine_LEDS_en.pdf

2) Recommendation 2018/01/MC-EnC				
Art. 1(1)-(6)	1. The Contracting Parties should prepare the analytical, institutional and regulatory preconditions for the development and adoption of integrated national energy and climate plans ('national plans') for the period from 2021 to 2030. 2. National plans should address the five dimensions of the European Union set out in the European Commission's Communication of 25 February 2015 in a integrated way which recognises the interactions between the different dimensions. They should also set out direction of national energy and climate objectives and policies in a way that is coherent with the commitments made by Contracting Parties under the Paris Agreement as well as with other possible long-term energy and climate targets for 2030 applicable to Contracting Parties. 3. National plans should define objectives for each dimension of the Energy Union. For each objective, the plans should include a description of the policies and measures planned for meeting these objectives. This should also include an assessment of how these policies interact with each other to ensure policy coherence and avoid overlapping regulation. National plans should contain a separate section on projections as an analytical basis of the plan, including reference and policy scenarios assessing the relevant impacts of the policies and measures proposed. 4. National plans should aim at streamlining existing sectorial planning and reporting tools applicable to Contracting Parties. 5. National plans should facilitate greater cooperation and coherence among Contracting Parties' and with respect to	Para 2(9) of 2030 Climate Change Concept Action Plan	9) Approval of the integrated National energy and climate change action plan for years of 2021-2030 […] Timeline: 2020	**Partial transposition** The necessary legal pre-condition for preparing the NECP already exists. Nevertheless, according to the information received from the MEEP [as of 27.01.2020] the working group for NECP is in process of establishment. Ukraine is expected to submit the NECP no later than by September 2020.
		Art. 1(1) of Presidential Decree No. 837/2019	(i) By 30 September 2020 in respect of preparation and approval of the Integrated Climate Change and Energy Development Plan until 2030 […]	

	EU Member States' approaches on climate and energy policies. 6. Contracting Parties should ensure comprehensive public participation in the preparation of national plans and inform the Secretariat accordingly. […] Deadline: No specific deadline			
Art. 3(1)-(2)	1. National plans should complement and where possible reinforce each other, using national strengths to address regional challenges in the most secure and cost-effective way. Contracting Parties should identify areas suitable for joint or coordinated planning and consult with each other early on in the preparation process. Particular attention should be paid to ensuring a coordinated approach concerning the development of new energy resources and infrastructures. 2. Coordination of national policies should also prevent adverse incentives, allow for exploiting synergies and mitigate inconsistencies between national policies of Contracting Parties. National Plans should therefore contain an assessment of how the envisaged objectives and policies in the plans will impact on other Contracting Parties and how cooperation across policy areas and sub-sectors should be strengthened. Deadline: No specific deadline			
Art. 4	1. Progress Report on the implementation of national plans should be submitted by Contracting Parties to the Secretariat every two years and where appropriate on an annual basis, with a view to align the timescales for domestic, EU and international reporting. Those reports should facilitate the			

	monitoring and the implementation of commitments taken under the United Nations Framework Convention on Climate Change (UNFCCC) and Paris Agreement. […] Deadline: No specific deadline			
Art. 5	1. The preparation of national plans should be an iterative and dynamic process that should start in 2018 and should be finalised as soon as possible, taking into account future developments of the Energy Community acquis. Deadline: No specific deadline			
3) Policy Guidelines (PG 03/2018)				
None	Three distinct 2030 energy and climate targets should be established: a target for energy efficiency, a target for the contribution of renewable energy sources, and a greenhouse gas emission reduction target. These targets should be in line with the EU targets for 2030, represent an equal ambition for the Contracting Parties and take into account relevant socio-economic differences, technological developments and the Paris Agreement on Climate Change. They should be expressed in targets for all Contracting Parties as a whole and/or individual targets for each Contracting Party, as appropriate. Contracting Parties should use the political consensus reached in these General Policy Guidelines in the preparation of their national energy and climate plans. Deadline: No specific deadline	Energy Strategy 2035	Climate change prevention and adaptation is also one of the priorities of global energy development (p. 5); Ensuring Ukraine's commitments to the objectives of the PA, KP and UNFCCC (p. 65); The key performance indicator – CO2 emissions targets set at 60% by 2030 and 50% by 2035 compared to 1990 level (p.2 of Annex I).	**Partially transposed** A binding target to cut emissions in the EU amounts to at least 40% below 1990 levels by 2030. Ukraine has set out a similar target but for 2050 in its 2050 LEDS, however, by 2030 its emission cut target amounts to 60% compared to 1990 levels.
		2050 LEDS	Being committed to achieving Paris Agreement goals and being guided by national priorities, Ukraine will ensure doing its best to achieve the indicative GHG emissions target of 31-34% by 2050, compare to 1990 level. This target is ambitious and fair in the context of Ukraine's participation in the global response to the climate change threat.	

3.2. Concluding remarks regarding the transposition of Recommendation 2016/02/MC-EnC, Recommendation 2018/01/MC-EnC and Policy Guidelines PG 03/2018

Under *Recommendation 2016/02/MC-EnC* Ukraine is encouraged to "prepare legal and institutional preconditions" in order to implement key elements of *Regulation (EU) 525/2013*, which include: 1) adoption of Low-carbon development strategies (Art. 4); 2) development of National inventory system for GHG emission (Art. 5-12); 3) introducing legislation defining national systems for policies, measures and projections (Chapter 5); 4) preparation and submission of biennial reports and national communications (Art. 18).

The existing legal framework ensures more than satisfactory compliance with the above-mentioned elements of the Regulation (EU) 525/2013. The GHG inventory system with a competent authority exists under the subordination of the newly merged MEEP. The recently adopted MRV law lays down rules for monitoring, reporting and verification registry of GHG emissions. The legal set-up for a registry of CSs operators and CSs reporting system is provided by the new ODS and F-gases law. This might significantly contribute to improving the estimation of ODS and F-gases in national GHG inventory. The designation of competent authorities in the field of MRV and CSs is also envisaged. However, national GHG emission system in Ukraine fails to take into account emissions and removals of GHG relating to LULUCF.

Nevertheless, stronger legal basis shall be in place for Ukraine's climate reporting. For the time being, most of climate-related policies and strategies are fragmented among action plans adopted at the level of secondary legislation, such as, inter alia, the 2030 Climate Change Concept Action Plan. At the same time, in the fulfillment of its international obligations Ukraine has submitted to the UNFCCC in 2013 its first Biennial Transparency Report and National Communication. Ukraine has formally communicated its 2050 Low Emission Development Strategy (2050 LEDS) to the UNFCCC in July 2018. The 2050 LEDS sets up an indicative GHG emissions target of 31 - 34% by 2050 (compared to 1990 levels) and contains a strategic vision and preconditions of transition towards low carbon development, policies and measures for de-carbonization of energy policies and measures for reducing the emissions and carbon sink from LULUCF.

In line with *Recommendation 2018/01/MC-EnC* Ukraine has a regulatory framework in place for a comprehensive 2021 – 2030 NECP the development of which is considered as a priority as per Presidential Decree and 2030 Climate Change Concept Action Plan. Nevertheless, the set up of NECP working group is still pending according to information received from MEEP (as for 27.01.2020).

With the view of provisions of the *Policy Guidelines 03/2018-ECS* Ukraine has set up an ambitious target for GHG emission reduction to 31-34% by 2050 compared to 1990 levels (2050 LEDS) and by 2030 – 60% compared to 1990 levels (Energy Strategy).

4. Wrap-up and Recommendations

Since mid-December Ukraine has visibly shifted up as regards adopting climate-relating legislation and clearing its way towards legal approximation in line with its obligations arising under both the AA and EnCT. The major legislative breakthrough is undoubtedly the adoption of the MRV law and ODS and F-gases law. Despite the missed deadline, the implementation of the above-mentioned laws is yet to begin. This, inter alia, will require sepping up the pace with adoption of necessary secondary legislation.

In compliance with *Directive 2003/87/EC* the recently adopted MRV law (although pending its entry into force) sets out rules for establishing MRV system, competent authority, penalty system and registry system for GHG and installations. Nevertheless, Ukrainian law fails to transpose fundamental provisions of Directive 2003/87/EC relating to creation of an ETS. Ukraine thus fails to fully meet its obligations under the AA given that transposition and implementation of ETS-related provisions of the Directive 2003/87/EC is explicitly required and transposition deadlines have already passed. However, the only reasonable explanation thereto is that creating a comprehensive and credible MRV system shall be a vital precondition for setting up an ETS. Thus, reviewing the transposition deadline for Directive 2003/87/EC as well as updating the EU *acquis* shall be considered as an option in this regard.

The ODS and F-gases law sets up a common legal framework for CSs. The highest transposition level is observed as regards *F-gases Regulation*. The Ukrainian law establishes rules for national training and certification requirements for CSs activities, introduces an enforcement system and imposes stricter reporting obligations than those referred to in the F-gases Regulation.

Ukraine has shown significant progress in transposition of *ODS Regulation*. The ODS and F-gases law introduces a ban on import, export and placing on the market of CSs and products, including goods using them. Two compliance concerns however exist as regards: 1) import/export of ODS goods and equipment for purposes of quarantine and pre-shipment treatment, and 2) absence of rules on ending the use of virgin and all HCFCs in line with Art. 5 of the ODS Regulation. Therefore, amendments to the ODS and F-gases Law are needed to remove these incompliances.

It is to be reminded that Ukraine is committed to gradually approximate its legislation with that of the EU along with the lines set out in the AA. Despite the delayed progress in transposition the implementation of the above-mentioned laws has not started yet. Moreover, the actual relevance and applicability of EU *acquis* although being binding under the AA can also be called into question. This directly relates to the fact that the EU climate *acquis* being binding under the AA is either no longer in force or has been amended in the EU. With this in view a relevant option would be considering updating climate-related EU *acquis* and timelines under the AA in the light of the dynamic approximation principle as referred to in Article 463 of the AA.

The newly updated legislative framework also brings Ukraine closer to compliance with EU climate *acquis* under the EnCT. The recently adopted MRV law lays down rules for monitoring, reporting and verification registry of GHG emissions in line with Regulation

(EU) 525/2013. Whereas the ODS and F-gases law provides rules for creation of registry of CSs operators and a reporting system on CS. This might significantly contribute to improving the estimation of CSs in national GHG inventories. This brings Ukraine to closer compliance with the *Recommendation 2016/02/MC-EnC*. However, the existing national GHG emission system still fails to account for emissions and removals of GHG relating to LULUCF. In overall compliance with Regulation (EU) 525/2013 Ukraine has a 2050 LEDS in place with the indicative GHG emissions target being 31 - 34% by 2050 (compared to 1990 levels).

Nevertheless, Ukraine is missing one of the core elements of Regulation (EU) 525/2013 being national legislation in place defining national systems for policies, measures and projections. As for now most of climate-related policies and strategies are fragmented among action plans, although are better to be enshrined at the level of primary legislation.

In line with *Recommendation 2018/01/MC-EnC* Ukraine has a regulatory framework in place for a comprehensive 2021 – 2030 NECP, the development of which is considered as a priority as per Presidential Decree and 2030 Climate Change Concept Action Plan. However, the set up of a NECP working group is pending according to information received from MEEP (as for 27.01.2020).

With the view of provisions of the *Policy Guidelines 03/2018-ECS* Ukraine has set up an ambitious target for GHG emission reduction to 31-34% by 2050 compared to 1990 levels (2050 LEDS) and by 2030 – 60% compared to 1990 levels (Energy Strategy).

It follows from the present analysis that the overall assessment of the fulfilment of Ukraine's climate-related obligations under the AA and EnCT is deemed to be positive. The following key recommendations are outlined to strengthen Ukraine's legal approximation with EU *acquis* under AA and EnCT and remove existing incompliances:

- Necessary secondary legislation shall be developed and/or adopted to start the implementation of the MRV and ODS and F-gases law (within six months from their entry into force);
- Non-compliances of the ODS and F-gases law as regards (1) allowing import/export of ODS goods and equipment for purposes of quarantine and pre-shipment treatment; and (2) absence of rules on ending the use of virgin and all HCFCs shall be removed by introducing respective legislative amendments;
- Implementation timelines and EU *acquis* itself in Annex XXX of the AA shall be revised and updated taking into account the evolution of EU law in the light of dynamic approximation principle as referred to Article 463 of the AA;
- Amendments to bylaws on national GHG emission system shall be introduced for the latter to take into account emissions and removals of GHG relating to LULUCF**;**
- NECP working group shall be in place so to start working on the development and submission of NECP by September 2020;
- Adopting a comprehensive primary law integrating national systems for policies, measures and projections shall be considered.

5. Annexes

5.1. Annex I: Annex XXX to EU-Ukraine Association agreement

Climate change and protection of the ozone layer

Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Directive 96/61/EC as amended by Directive 2004/101/EC
— adoption of national legislation and designation of competent authority/ies
— establishment of a system for identifying relevant installations and for identifying greenhouse gases (Annexes I and II)
— development of a national allocation plan to distribute allowances to installations (art. 9)
— establishment of a system for issuing greenhouse gas emissions permits and issuance of allowances to be traded domestically among installations in Ukraine (art. 4 and 11 - 13)
— establishment of monitoring, reporting, verification and enforcement systems and public consultations procedures (art. 9, 14 – 17, 19 and 21)
Timetable: these provisions of the Directive shall be implemented within 2 years of the entry into force of this Agreement.
Regulation (EC) 842/2006 on certain fluorinated greenhouse gases
— adoption of national legislation and designation of competent authority/ies
— establishment/adaptation of national training and certification requirements for relevant personnel and companies (art. 5)
— establishment of reporting systems for acquiring emission data from the relevant sectors (art. 6)
— establishment of an enforcement system (art. 13)
Timetable: these provisions of the Regulation shall be implemented within 2 years of the entry into force of this Agreement.
Regulation (EC) 2037/2000 on substances that deplete the ozone layer as amended by Regulations (EC) 2038/2000, (EC) 2039/2000, (EC) 1804/2003, (EC) 2077/2004, (EC) 29/2006, (EC) 1366/2006, (EC) 1784/2006, (EC) 1791/2006 and (EC) 2007/899 and Decisions 2003/160/EC, 2004/232/EC and 2007/54/EC
— adoption of national legislation and designation of competent authority/ies
— establishment of bans for controlled substances including ending the use of virgin hydrochlorofluorocarbons by 2010 and of all hydrochlorofluorocarbons by 2020 (art. 4 and 5)
— establishment of a quantitative limit for the use of methyl bromide for quarantine and pre-shipment applications at the level of the average use in the years 1996, 1997 and 1998 (art. 4)
— phasing out of the placing on the market of virgin hydrochlorofluorcarbons by 2015 (art. 4)
— establishment of obligations to recover, recycle, reclaim and destruct used controlled substances (Art. 16)
— establishment of procedures for monitoring and inspecting leakages of controlled substances (Art. 17)
Timetable: these provisions of the Regulation shall be implemented within 2 years of the entry into force of this Agreement.

5.2. Annex II: Categories of activities with GHG emissions according to Annex I to the Directive 2003/87/EC

ANNEX I
CATEGORIES OF ACTIVITIES REFERRED TO IN ARTICLES 2(1), 3, 4, 14(1), 28 AND 30

1. Installations or parts of installations used for research, development and testing of new products and processes are not covered by this Directive.
2. The threshold values given below generally refer to production capacities or outputs. Where one operator carries out several activities falling under the same subheading in the same installation or on the same site, the capacities of such activities are added together.

Activities	Greenhouse gases
Energy activities	
Combustion installations with a rated thermal input exceeding 20 MW (except hazardous or municipal waste installations)	Carbon dioxide
Mineral oil refineries	Carbon dioxide
Coke ovens	Carbon dioxide
Production and processing of ferrous metals	
Metal ore (including sulphide ore) roasting or sintering installations	Carbon dioxide
Installations for the production of pig iron or steel (primary or secondary fusion) including continuous casting, with a capacity exceeding 2,5 tonnes per hour	Carbon dioxide
Mineral industry	
Installations for the production of cement clinker in rotary kilns with a production capacity exceeding 500 tonnes per day or lime in rotary kilns with a production capacity exceeding 50 tonnes per day or in other furnaces with a production capacity exceeding 50 tonnes per day	Carbon dioxide
Installations for the manufacture of glass including glass fibre with a melting capacity exceeding 20 tonnes per day	Carbon dioxide
Installations for the manufacture of ceramic products by firing, in particular roofing tiles, bricks, refractory bricks, tiles, stoneware or porcelain, with a production capacity exceeding 75 tonnes per day, and/or with a kiln capacity exceeding 4 m^3 and with a setting density per kiln exceeding 300 kg/m^3	Carbon dioxide
Other activities	
Industrial plants for the production of (a) pulp from timber or other fibrous materials	Carbon dioxide
(b) paper and board with a production capacity exceeding 20 tonnes per day	Carbon dioxide

5.3. Annex III: The criteria for verification of GHG emissions listed in Annex V of Directive 2003/87/EC

ANNEX V
CRITERIA FOR VERIFICATION REFERRED TO IN ARTICLE 15

General Principles

1. Emissions from each activity listed in Annex I shall be subject to verification.
2. The verification process shall include consideration of the report pursuant to Article 14(3) and of monitoring during the preceding year. It shall address the reliability, credibility and accuracy of monitoring systems and the reported data and information relating to emissions, in particular:
   (a) the reported activity data and related measurements and calculations;
   (b) the choice and the employment of emission factors;
   (c) the calculations leading to the determination of the overall emissions; and
   (d) if measurement is used, the appropriateness of the choice and the employment of measuring methods.
3. Reported emissions may only be validated if reliable and credible data and information allow the emissions to be determined with a high degree of certainty. A high degree of certainty requires the operator to show that:
   (a) the reported data is free of inconsistencies;
   (b) the collection of the data has been carried out in accordance with the applicable scientific standards; and
   (c) the relevant records of the installation are complete and consistent.
4. The verifier shall be given access to all sites and information in relation to the subject of the verification.
5. The verifier shall take into account whether the installation is registered under the Community eco-management and audit scheme (EMAS).

Methodology

Strategic analysis

6. The verification shall be based on a strategic analysis of all the activities carried out in the installation. This requires the verifier to have an overview of all the activities and their significance for emissions.

Process analysis

7. The verification of the information submitted shall, where appropriate, be carried out on the site of the installation. The verifier shall use spot-checks to determine the reliability of the reported data and information.

Risk analysis

8. The verifier shall submit all the sources of emissions in the installation to an evaluation with regard to the reliability of the data of each source contributing to the overall emissions of the installation.
9. On the basis of this analysis the verifier shall explicitly identify those sources with a high risk of error and other aspects of the monitoring and reporting procedure which are likely to contribute to errors in the determination of the overall emissions. This especially involves the choice of the emission factors and the calculations necessary to determine the level of the emissions from individual sources. Particular attention shall be given to those sources with a high risk of error and the abovementioned aspects of the monitoring procedure.
10. The verifier shall take into consideration any effective risk control methods applied by the operator with a view to minimising the degree of uncertainty.

Report

11. The verifier shall prepare a report on the validation process stating whether the report pursuant to Article 14(3) is satisfactory. This report shall specify all issues relevant to the work carried out. A statement that the report pursuant to Article 14(3) is satisfactory may be made if, in the opinion of the verifier, the total emissions are not materially misstated.

Minimum competency requirements for the verifier

12. The verifier shall be independent of the operator, carry out his activities in a sound and objective professional manner, and understand:
    (a) the provisions of this Directive, as well as relevant standards and guidance adopted by the Commission pursuant to Article 14(1);
    (b) the legislative, regulatory, and administrative requirements relevant to the activities being verified; and
    (c) the generation of all information related to each source of emissions in the installation, in particular, relating to the collection, measurement, calculation and reporting of data.

5.4. Annex IV: List of ODS included in Annex No. 1 to ODS law and F-gases law of Ukraine

Annex No. 1
to the Law of Ukraine
dd. 12 December 2019 No. 376-IX

LIST
of ozone-depleting substances, their ozone-depleting potential and global warming potential

Substance		Ozone-depleting potential	100-year global warming potential
Chemical formula	Designation		
$CFCl_3$	(CFC-11)	1	4 750
CF_2Cl_2	(CFC-12)	1	10 900
$C_2F_2CL_3$	(CFC-113)	0.8	6 130
$C_2F_4CL_2$	(CFC-114)	1	10 000
C_2F_5CL	(CFC-115)	0.6	7 370
CF_2BrCl	(Halon 1211)	3	
CF_3Br	(Halon 1301)	10	
$C_2F_4Br_2$	(Halon 2402)	6	
CF_3Cl	(CFC-13)	1	
C_2FCl_5	(CFC-111)	1	
$C_2F_2Cl_4$	(CFC-112)	1	
C_3FCl_7	(CFC-211)	1	
$C_3F_2Cl_6$	(CFC-212)	1	
$C_3F_3Cl_5$	(CFC-213)	1	
$C_3F_4Cl_4$	(CFC-214)	1	
$C_3F_5Cl_3$	(CFC-215)	1	
$C_3F_6Cl_2$	(CFC-216)	1	
C_3F_7Cl	(CFC-217)	1	
CCl_4	tetrachloromethane	1	
$C_2H_3Cl_3$	1,1,1-trichloroethane (methyl chloroform)	0.1	
$CHFCl_2$	(HCFC-21)	0.04	151
CHF_2Cl	(HCFC-22)	0.055	1 810
CH_2FCl	(HCFC-31)	0.02	
C_2HFCl_4	(HCFC-121)	0.01-0.04	
$C_2HF_2Cl_3$	(HCFC-122)	0.02-0.08	
$C_2HF_3Cl_2$	(HCFC-123)	0.02-0.06	77
$CHCl_2CF_3$	(HCFC-123)	0.02	
C_2HF_4Cl	(HCFC-124)	0.02-0.04	609
$CHFClCF_3$	(HCFC-124)	0.022	
$C_2H_2FCl_3$	(HCFC-131)	0.007-0.05	
$C_2H_2F_2Cl_2$	(HCFC-132)	0.008-0.05	
$C_2H_2F_3Cl$	(HCFC-133)	0.02-0.06	
$C_2H_3FCl_2$	(HCFC-141)	0.005-0.07	
CH_3CFCl_2	(HCFC-141b)	0.11	725
$C_2H_3F_2Cl$	(HCFC-142)	0.008-0.07	
CH_3CF_2Cl	(HCFC-142b)	0.065	2 310
C_2H_4FCl	(HCFC-151)	0.003-0.005	
C_3HFCl_6	(HCFC-221)	0.015-0.07	
$C_3HF_2Cl_5$	(HCFC-222)	0.01-0.09	
$C_3HF_3Cl_4$	(HCFC-223)	0.01-0.08	
$C_3HF_4Cl_3$	(HCFC-224)	0.01-0.09	
$C_3HF_5Cl_2$	(HCFC-225)	0.02-0.07	
$CF_3CF_2CHCl_2$	(HCFC-225ca)	0.025	122
CF_2ClCF_2CHClF	(HCFC-225cb)	0.033	595
C_3HF_6Cl	(HCFC-226)	0.02-0.1	
$C_3H_2FCl_5$	(HCFC-231)	0.05-0.09	
$C_3H_2F_2Cl_4$	(HCFC-232)	0.008-0.1	
$C_3H_2F_3Cl_3$	(HCFC-233)	0.007-0.23	
$C_3H_2F_4Cl_2$	(HCFC-234)	0.01-0.28	
$C_3H_2F_5Cl$	(HCFC-235)	0.03-0.52	
$C_3H_3FCl_4$	(HCFC-241)	0.004-0.09	
$C_3H_3F_2Cl_3$	(HCFC-242)	0.005-0.13	
$C_3H_3F_3Cl_2$	(HCFC-243)	0.007-0.12	
$C_3H_3F_4Cl$	(HCFC-244)	0.009-0.14	

$C_3H_4FCl_3$	(HCFC-251)	0.001-0.01
$C_3H_4F_2Cl_2$	(HCFC-252)	0.005-0.04
$C_3H_4F_3Cl$	(HCFC-253)	0.003-0.03
$C_3H_5FCl_2$	(HCFC-261)	0.002-0.02
$C_3H_5F_2Cl$	(HCFC-262)	0.002-0.02
C_3H_6FCl	(HCFC-271)	0.001-0.03
$CHFBr_2$		1
CHF_2Br	(HBFC-22B1)	0.74
CH_2FBr		0.73
C_2HFBr_4		0.3-0.8
$C_2HF_2Br_3$		0.5-1.8
$C_2HF_3Br_2$		0.4-1.6
C_2HF_4Br		0.7-1.2
$C_2H_2FBr_3$		0.1-1.1
$C_2H_2F_2Br_2$		0.2-1.5
$C_2H_2F_3Br$		0.7-1.6
$C_2H_3FBr_2$		0.1-1.7
$C_2H_3F_2Br$		0.2-1.1
C_2H_4FBr		0.07-0.1
C_3HFBr_6		0.3-1.5
$C_3HF_2Br_5$		0.2-1.9
$C_3HF_3Br_4$		0.3-1.8
$C_3HF_4Br_3$		0.5-2.2
$C_3HF_5Br_2$		0.9-2
C_3HF_6Br		0.7-3.3
$C_3H_2FBr_5$		0.1-1.9
$C_3H_2F_2Br_4$		0.2-2.1
$C_3H_2F_3Br_3$		0.2-5.6
$C_3H_2F_4Br_2$		0.3-7.5
$C_3H_2F_5Br$		0.9-1.4
$C_3H_3FBr_4$		0.08-1.9
$C_3H_3F_2Br_3$		0.1-3.1
$C_3H_3F_3Br_2$		0.1-2.5
$C_3H_3F_4Br$		0.3-4.4
$C_3H_4FBr_3$		0.03-0.3
$C_3H_4F_2Br_2$		0.1-1
$C_3H_4F_3Br$		0.07-0.8
$C_3H_5FBr_2$		0.04-0.4
$C_3H_5F_2Br$		0.07-0.8
C_3H_6FBr		0.02-0.7
CH_2BrCl	bromochloromethane	0.12
CH_3Br	methyl bromide	0.6

For the purposes of this Law, upon availability of a range of indicators of the substance's ozone-depleting potential, the highest indicator shall apply.

5.5. Annex V: List of F-gases included in Annex No. 2 to the ODS and F-gases Law of Ukraine

Annex No. 2
to the Law of Ukraine
dd. 12 December 2019 No. 376-IX

LIST
of fluorinated greenhouse gases, their global warming potential

Substance		100-year global warming potential
Chemical formula	Designation	
1. CHF_2CHF_2	HFC-134	1 100
CH_2FCF_3	HFC-134a	1 430
CH_2FCHF_2	HFC-143	353
$CHF_2CH_2CF_3$	HFC-245fa	1 030
$CF_3CH_2CF_2CH_3$	HFC-365mfc	794
CF_3CHFCF_3	HFC-227ea	3 220
$CH_2FCF_2CF_3$	HFC-236cb	1 340
CHF_2CHFCF_3	HFC-236ea	1 370
$CF_3CH_2CF_3$	HFC-236fa	9 810
$CH_2FCF_2CHF_2$	HFC-245ca	693
$CF_3CHFCHFCF_2CF_3$	HFC-43-10mee	1 640
CH_2F_2	HFC-32	675
CHF_2CF_3	HFC-125	3 500
CH_3CF_3	HFC-143a	4 470
CH_3F	HFC-41	92
CH_2FCH_2F	HFC-152	53
CH_3CHF_2	HFC-152a	124
CHF_3	HFC-23	14 800
2. SF_6	sulfur hexafluoride	22 200
CF_4	carbon tetrafluoride	5 700
C_2F_6	hexafluoroethane	11 900
C_3F_8	octafluoropropane	8 600
C_4F_{10}	perfluorobutane	8 600
C_5F_{12}	perfluoropentane	8 900
C_6F_{14}	perfluorohexane	9 000
c-C_4F_8	octafluorocyclobutane	10 000