The 2012 Doha Amendment to the Kyoto Protocol: Implications and Recommendations for Ukraine

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The 2012 Doha Amendment: Implications and Recommendations for Ukraine

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<th>Description</th>
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<tbody>
<tr>
<td>AAU</td>
<td>Assigned Amount Unit</td>
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<tr>
<td>CER</td>
<td>Certified Emission Reduction</td>
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<td>CP1</td>
<td>First Commitment Period</td>
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<td>CP2</td>
<td>Second Commitment Period</td>
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<td>ERU</td>
<td>Emission Reduction Unit</td>
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<td>EU</td>
<td>European Union</td>
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<td>FDI</td>
<td>Foreign Direct Investment</td>
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<td>GHG</td>
<td>Greenhouse Gas</td>
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<td>JI</td>
<td>Joint Implementation</td>
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<td>LULUCF</td>
<td>Land Use, Land-Use Change and Forestry</td>
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<td>PPP</td>
<td>Purchasing Power Parity</td>
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<td>QELRO</td>
<td>Quantified Emission Limitation or Reduction Objective</td>
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<td>UNFCCC</td>
<td>United Nations Framework Convention on Climate Change</td>
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Executive Summary

The international climate negotiations in Doha at the end of 2012 resulted in the adoption of an amendment to the Kyoto Protocol regulating the second commitment period (CP2) from 2013 to 2020. Although Ukraine joined the negotiation text with a 20 percent reduction target for 2020, it indicated that it may decide not to ratify the Doha Amendment. This paper outlines the implications of the new regulations for Ukraine and discusses the benefits of participation in CP2.

During the first commitment period (CP1) of the Kyoto Protocol (2008-2012), Ukraine significantly benefited from the financial opportunities available through the flexible mechanisms. With more than 47 million sold assigned amount units and about 470 million Euros received through emission trading, Ukraine was one of the major beneficiaries of CP1.

The regulations for CP2 restrict the quantity of emission allowances for a country to its average emissions from 2008 to 2010 times eight. For Ukraine, this corresponds to emission allowances of about 3.1 billion tons of CO2 equivalents for CP2 and to an average of about 0.39 billion tons of CO2 equivalents per year. Compliance with this ambitious reduction target is only possible if Ukraine undertakes immediate structural reforms to fundamentally shift away from its current carbon-intensive growth path towards significant improvements in energy efficiency. Further active engagement in a Low Carbon Growth Strategy should therefore be a focus of Ukrainian policy.

Despite the challenging emission target, the arguments in favour of participation in CP2 predominate. Participating in CP2 would foster Ukraine’s political and economic integration with the European Union (EU) which is of great importance for Ukraine considering its interest in the association to the EU. Furthermore, it would increase the international competitiveness of Ukrainian exports and represent an important step of preparation for a post-2020 global climate framework.

Finally, Ukraine should consider engaging in bilateral agreements with the European Union or South Korea to receive short-term financial or technological assistance in compliance with the emission targets.
1. Introduction

Worldwide greenhouse gas (GHG) emissions reached a growth rate of 3 percent in the last decade. Top emitters are China, United States, Brazil and India, but also Ukraine remains one of the most carbon-intensive economies in the world. With a carbon intensity of more than one metric ton of CO2 per thousand US Dollar\(^1\) (in PPP) compared to an EU-27 average of 0.27 metric tons of CO2 (EIA 2013), Ukraine has a significant potential for reducing GHG emissions.

The Kyoto Protocol is the first international agreement with legally binding GHG emission reduction obligations for its signatory parties. The first commitment period (CP1) lasted from 2008 to 2012. During the Doha meeting in December 2012, the Parties to the Kyoto Protocol including Ukraine agreed to extend the Kyoto Protocol to the second commitment period (CP2) from 2013 to 2020 and set the date of 2015 for the development of a successor document to be implemented from 2020 onwards. Although Ukraine initially gave its written consent to join CP2, it later indicated that it may decide not to ratify the Doha Amendment. This paper assesses the implications of the amendment for Ukraine.

2. The Kyoto Protocol and its implications for Ukraine

2.1 Ukraine as a major beneficiary in CP1

Classified as Annex B country\(^2\), in the first commitment period Ukraine had the obligation not to exceed its GHG emission level of 1990. After the dissolution of the Soviet Union and during a long recession Ukraine remained well below the set emission levels throughout CP1. In 2008, Ukraine’s level of emissions was only 46 percent of 1990. Consequently, Ukraine received an estimated surplus of assigned amount units (AAUs)\(^3\) of 2.6 billion tonnes of CO2 equivalents (Carbon Market Watch 2013). These surplus AAUs are often referred to as “hot air” since the surplus was the result of weak targets rather than real emission reduction efforts.
During the first commitment period Ukraine heavily relied on the flexible mechanisms, in particular the Joint Implementation (JI)\(^4\) projects and the Green Investment Scheme (GIS)\(^5\). Among the former Soviet Union countries, Ukraine has been the major beneficiary of the flexible mechanisms: With 184 registered JI projects and 130 million issued Emission Reduction Units (ERUs)\(^6\), Ukraine is the biggest supplier of ERUs (Thomson Reuters 2013). Furthermore, from 2008 to 2012, Ukraine sold about 47 million assigned amount units, turning Ukraine into the third largest seller of AAUs. The total amount of funds received by Ukraine through the GIS during the first commitment period was about 470 million Euros (National Ecological Centre of Ukraine 2012).

Hence, participating in the first commitment period has been clearly beneficial for Ukraine. The funding provided through the flexible mechanisms opened up opportunities in attracting foreign investments for the modernization of the national economy. This was particularly important for the sectors lacking capital due to high risks or low financial returns.

### 2.2 The 2012 Doha Amendment and its implications for Ukraine

At the Doha round in December 2012, the parties adopted an amendment to the original text of the Kyoto Protocol regulating the second commitment period (see UNFCCC 2013a). The amendment has not yet entered into legal force.

As listed in the amendment, Ukraine pledged to keep its GHG emissions 20 percent below 1990 levels in 2020 (see Figure 1) and offered a Quantified Emission Limitation or Reduction Objective (QELRO)\(^7\) for the second commitment period of 76 per cent compared to the base year 1990 (UNFCCC 2013a). This corresponds to approximately 707 million tons of CO2 equivalents per year excluding LULUCF\(^8\) (see Table 1). This represents an over 70 percent increase from current emission levels and the least ambitious target of all post-2012 targets proposed by Annex I countries of the UNFCCC (UNDP 2013). Furthermore, Ukraine requested that there is no cancellation or limitation of the use of any of its assigned amount units.\(^9\)

Under the new regulations for CP2 the initial assigned amount, i.e. the number of AAUs a country receives at the beginning of the second commitment period (Carbon Market Watch 2013), is restricted to a country’s average emissions between 2008 and 2010. This implies that emissions should be stabilized at a level corresponding to the period of the global economic crisis which was accompanied by significant reductions in production and
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correspondingly in GHG emissions. In Ukraine, emissions dropped from more than 420 million tons of CO2 equivalents in 2008 to about 365 million tons of CO2 equivalents in 2009 (see Figure 1). Furthermore, the amendment to the Kyoto Protocol involves the cancellation of assigned amount units that exceed the number of AAUs equivalent to the average emissions between 2008 and 2010 times eight. The basic idea behind these strict limitations of the quantity of assigned amount units is to avoid the accumulation of new surplus or new hot air as it was the case in CP1.

**Table 1: Impact of Doha Amendment on Ukraine’s emission allowances**

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
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<tbody>
<tr>
<td>Base year GHG emissions 1990 excl. LULUCF</td>
<td>929,894</td>
</tr>
<tr>
<td>Pledge 2020 (1990-20%)</td>
<td>743,915</td>
</tr>
<tr>
<td>QELRO: 76% of base year</td>
<td>706,719</td>
</tr>
<tr>
<td>Initial assigned amount 2013-2020 (76% of base year x 8)</td>
<td>5,653,753</td>
</tr>
<tr>
<td>Yearly Emissions</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>421,261</td>
</tr>
<tr>
<td>2009</td>
<td>365,307</td>
</tr>
<tr>
<td>2010</td>
<td>383,211</td>
</tr>
<tr>
<td>Average 2008-2010</td>
<td>389,926</td>
</tr>
<tr>
<td>Share of level of emissions of base year</td>
<td>0.4193</td>
</tr>
<tr>
<td>Yearly available AAUs if distributed uniformly</td>
<td>389,926</td>
</tr>
<tr>
<td>AAUs to be transferred to cancellation account (Initial assigned amount minus de facto available AAUs)</td>
<td>2,534,342</td>
</tr>
</tbody>
</table>

Source: UNFCCC 2013c, own calculations

In Ukraine, average emissions of 2008, 2009 and 2010 amount to about 390 million tons of CO2 equivalents excluding LULUCF (see Table 1). This corresponds to approximately 42 percent of the level of emissions in 1990. Following the Doha regulations and multiplying the average emissions by eight (the number of years of the second commitment period), Ukraine receives about 3.1 billion assigned amount units for the second commitment period (see Table 1). The Doha regulations also imply - in contrast to Ukraine’s request - the cancellation of more than 2.5 billion AAUs that have to be transferred to the national cancellation account and cannot be used for compliance with the emission targets (see Table 1).
Although Ukraine disposes over a significant surplus of AAUs from the first commitment period (see section 2.1), the Doha surplus rules\textsuperscript{14} prohibit the use of these excess units for compliance in CP2 since Ukraine’s CP2 emissions do not exceed its initial assigned amount.\textsuperscript{15} In order to cover emissions that are above the 2008-2010 average, Ukraine would therefore need to buy emission allowances from other countries.

In theory, Ukraine could also sell its CP1 AAU surplus to other countries in exchange for CP2 AAUs that can be used for compliance in the second commitment period. In practice however, this option is ruled out since the potential buyers of excess quotas, i.e. Australia, Japan, Liechtenstein, Monaco, Norway, Switzerland and the European Union declared that they will not purchase any assigned amount units transferred from the first commitment period to the second (see statements in Annex II of UNFCCC 2013b).
Hence de facto Ukraine is allowed to emit a total quantity of about 3.1 billion tons of CO2 equivalents in CP2. If distributed uniformly\textsuperscript{16} this implies emission allowances of about 0.39 billion tons of CO2 equivalents per year (see red line in Figure 1 for a graphical illustration). This is an ambitious but not unrealistic emission target for Ukraine. If the policy measures and the energy efficiency efforts set out in the new draft Energy Strategy\textsuperscript{17} of Ukraine are all realized, GHG emissions would even reach a lower level than the one required by the Kyoto regulations. An illustration of the assumptions under which Ukraine will be able to achieve the Kyoto emission targets, will follow in Chapter 4 of the Third Project Report, where the business-as-usual economic scenarios till 2020 and 2050 are developed.

Concerning the Joint Implementation mechanism the Doha round has not brought up a final decision on its approval or adoption. A review of the guidelines is assumed to continue in subsequent negotiating sessions under the Subsidiary Body of Implementation (SBI) (Carbon Market Watch 2013). However, even in the unlikely case that the JI mechanism is continued in CP2, it is questionable whether there would be any buyers of Emission Reduction Units generated by the JI projects.

Given the conflicting targets pledged by Ukraine and set by the Doha Amendment, Ukrainian policy makers need to weigh up whether or not to ratify the amendment.

3. The case of ratification of the Doha Amendment

If Ukraine ratifies the Doha Amendment, it faces an ambitious emission target requiring considerable efforts to achieve it. The biggest challenge is the predetermined short time period. Only if Ukraine undertakes immediate structural reforms to turn around its current economic model towards less energy consumption and significant improvements in energy efficiency, compliance with the emission targets is realistic. This requires an economic strategy for low carbon growth and implies substantial investment expenditures. However, such reforms require some time until they can deliver first benefits.

In spite of the challenging new emission target, participation in CP2 is part of a much wider context and has several advantages for Ukraine.
The integration process with the European Union (EU) is an official strategic goal of Ukrainian policy and has already led to several political achievements:

- Ukraine cooperates with the EU under the Eastern Partnership umbrella which aims to accelerate political association and deepen economic integration between the EU and the Eastern European partner countries (e.g. Armenia, Belarus, Georgia, Moldova, Ukraine) (IEA 2012).
- The EU and Ukraine have initialled an Association Agreement to further strengthen political and economic cooperation between the two parties. While negotiations of the agreement were launched in 2007, the signing of the agreement is planned for the Eastern Partnership summit in Vilnius in November 2013 (EU 2012). Not participating in CP2 would imply a significant step backwards with regards to Ukraine’s political and economic integration with the EU and would dramatically weaken their bilateral relationship.

- Even if Ukraine decided not to ratify the Doha CP2 Amendment, it would still need to engage in emission reduction policies due to other commitments:
  - In February 2011, Ukraine officially acceded the European Energy Community Treaty (IEA 2012). Under that agreement, Ukraine has undertaken the obligation to implement a number of measures to reduce emissions from large combustion plants until 2018 and to achieve a share of 11 percent of renewable energy in the structure of gross energy consumption until 2020.
  - Within the context of the draft Updated Energy Strategy of Ukraine till 2030, Ukraine aims, inter alia, to reduce energy consumption in industries by 30-35 percent until 2030 compared to the base year 2010 (Ministry of Coal and Energy Industry 2012).
  - International discussions on preventing climate change will continue and a gradual increase of climate obligations will follow for all countries. Ukraine will therefore need to prepare for the likely implementation of a post-2020 global climate framework.

- Along with an increasing focus on sustainable development in other countries, Ukraine’s carbon intensive exports potentially face increasingly difficult prospects. The tendency to limit the access of carbon intensive products to markets may become a matter of survival for Ukrainian exports to European markets. Not participating in CP2 may therefore imply future higher trade barriers for Ukrainian products failing to satisfy “green and sustainable” standards.
Finally, Ukrainian policy makers often argue that emission reductions restrict economic growth and lead to negative impacts on the competitiveness of the economy. Indeed, emission reductions require costly investments and thus, reduce short-term GDP growth. On the other hand however, energy-efficiency investments stimulate demand for machinery, engineering, construction services etc., which tends to increase GDP. Moreover, the financing of costly investments can be facilitated through – and might even initiate in the first place – foreign direct investments (FDI) and capital transfers from abroad (for example through bilateral channels with the EU), which in turn increases rather than decreases GDP. However, FDI and in particular foreign capital transfers will require Ukraine’s participation in Kyoto CP2.

To determine whether and to which extent the Kyoto emission targets will be achieved is not a simple matter. A profound economic analysis is necessary which will also serve as a basis for a Low Carbon Development Plan (see Chapter 6 of the Third Project Report). This is the objective of the ongoing project “Capacity Building for Low Carbon Growth in Ukraine”.

4. Policy Recommendation

Considering the wider context and the potential benefits for Ukraine of participation in the second commitment period of the Kyoto Protocol opting out is not recommendable. Although reducing GHG emissions to the 2008-2010 level by 2013/2014 - as implied by the Doha Amendment - constitutes an ambitious short-term target, the benefits of ratifying the amendment predominate. Participation in the second commitment period would for example foster Ukraine’s political and economic integration with the European Union, increase the international competitiveness of Ukrainian exports and represent an important step of preparation for a post-2020 global climate framework.

However, big efforts are needed in order to achieve the emission targets. Ukraine needs to fundamentally shift away from its current carbon-intensive growth path towards less energy consumption and significant improvements in energy efficiency. This necessarily implies the decoupling of energy consumption and GHG emissions from economic growth. Only if Ukraine actively engages in a Low Carbon Growth Strategy to overcome inefficient and unsustainable production structures, compliance with the GHG emission targets under Kyoto is realistic.
Considering the immediate nature of the emission reduction obligations, Ukraine should consider engaging in bilateral agreements with the European Union or other countries, e.g. South Korea, to receive assistance in compliance with its emission targets. This assistance could for example take the form of technology transfers facilitating short-term modernization processes and energy improvements in the economy.

References


National Ecological Centre of Ukraine (2012): Review of funds expenditure obtained under the international emissions trading in Ukraine.


Endnotes

1 base year 2005.
3 “Assigned Amount Units (AAUs) are emission rights that were introduced under the Kyoto Protocol. One AAU allows a country to emit 1 tonne of CO2. Each country with an emission reduction commitment received AAUs that were equivalent to the number of tonnes it was allowed to emit during the Kyoto Protocol’s first 5-year commitment period.” CCAP-Europe, CDM-Watch (2012): The Phantom Menace - An introduction to the Kyoto Protocol Allowances surplus. Policy Brief. July 2012.
4 “The mechanism known as “joint implementation”, defined in Article 6 of the Kyoto Protocol, allows a country with an emission reduction or limitation commitment under the Kyoto Protocol (Annex B Party) to earn emission reduction units (ERUs) from an emission-reduction or emission removal project in another Annex B Party, each equivalent to one tonne of CO2, which can be counted towards meeting its Kyoto target. Joint implementation offers Parties a flexible and cost-efficient means of fulfilling a part of their Kyoto commitments, while the host Party benefits from foreign investment and technology transfer.” UNFCCC (2013), http:// unfccc.int/kyoto_protocol/mechanisms/joint_implementation/items/1674.php.
5 “The Green Investment Scheme (GIS) is a newly developed mechanism in the framework of International Emission Trade (IET). It is designed to achieve greater flexibility in reaching the targets of the Kyoto Protocol while preserving environmental integrity of IET. Under the GIS a Party to the Protocol […] can sell the excess of its Kyoto quota units (AAUs) to another Party. The proceeds from the AAU sales should be “greened”, i.e. channelled to the development and implementation of the projects either acquiring the greenhouse gases emission reductions (hard greening) or building up the necessary framework for this process (soft greening).” http://archive.rec.org/REC/Programs/ClimateChange/green-investment-scheme.html
6 See endnote 4.
7 “The QELRO, expressed as a percentage in relation to a base year, denotes the average level of anthropogenic carbon dioxide equivalent emissions of greenhouse gases […] that a Party […] would be allowed to emit on an annual basis during a given commitment period.” UNFCCC (2011): Issues relating to the transformation of pledges for emission reductions into quantified emission limitation and reduction objectives: methodology and examples. Revised technical paper. FCCC/TP/2010/3/Rev.1.)
8 Land use, Land-use change and forestry.
9 This request is expressed in the footnote accompanying Ukraine’s quantified emission reduction target in the Doha Amendment: “Should be full carry-over and there is no acceptance of any cancellation or any limitation on use of this legitimately acquired sovereign property.” (UNFCCC 2013a)
10 The amendment does not specify any fines or penalties binding in the case that a party does not meet its emission targets.
11 Doha Amendment, Article 3, paragraph 7: “Any positive difference between the assigned amount of the second commitment period for a Party included in the Annex I and average annual emissions for the first three years of the preceding commitment period multiplied by eight shall be transferred to the cancellation account of that Party.” (UNFCCC 2013a) Following the interpretation of Carbon Market Watch 2013, we assume that “assigned amount” refers to “the number of AAUs a country receives based on the QELRO it submitted”, i.e. to the initial assigned amount which is fixed. For a detailed discussion on the difference between assigned amount and initial assigned amount see Carbon Market Watch 2013: “Doha decisions on the Kyoto surplus explained”.
12 Displayed values are rounded.
13 GHG emissions are presented excluding LULUCF following Article 3, Paragraph 7 of the Doha Amendment: “[…] Those Parties included in Annex I for whom land-use change and forestry constituted a net source of greenhouse gas emissions in 1990 shall include in their 1990 emissions base year or period the aggregate anthropogenic carbon dioxide equivalent emissions by sources
minus removals by sinks in 1990 from land-use change for the purposes of calculating their assigned amount.” (UNFCCC 2013a)

Paragraph 25 of decision 1/CMP.8 (bold added): “Decides further that units in a Party’s previous period surplus reserve account may be used for retirement during the additional period for fulfilling commitments of the second commitment period up to the extent by which emissions during the second commitment period exceed the assigned amount for that commitment period [...]” (UNFCCC 2013b)

If on the contrary, CP2 emissions were higher than a country’s initial assigned amount, there would be no limit on how much of the CP1 surplus a country could use to comply with its CP2 target (Carbon Market Watch 2013). In other words, if Ukraine set its QELRO to the level of its 2008-2010 average emissions, it could use its surplus AAUs from CP1 for compliance in CP2 and would without any problem achieve its emission target. For a detailed discussion of this option, see Carbon Market Watch 2013: “Doha decisions on the Kyoto surplus explained”. However, this alternative option may be difficult to implement politically.

Of course, Ukraine could also distribute its allowances non-uniformly or even non-linearly.


The Energy Community Treaty constitutes the legal and economic framework for Network Energy between the EU and a number of third countries to extend the internal EU energy market to Southeast Europe and beyond.

http://www.energycommunity.org/portal/page/portal/ENC_HOME/ENERGY_COMMUNITY/Legal/.

For a detailed discussion of the economic sectors and policy measures with the greatest potential for energy efficiency improvements, see DIW econ (2013): “Towards a low carbon growth strategy for Ukraine: Key policy steps.”