



Roadmap for the Consideration of Establishment and Operation of a Greenhouse Gas Emissions Trading System in Turkey



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Establishment and Operation of a
Greenhouse Gas Emissions Trading
System in Turkey**



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Summary for High Level Policy Makers

Introduction

The 2015 Paris Agreement and its recent entry into force marks a pivotal step in combating climate change. For the first time in history, all Parties to the United Nations Framework Convention on climate Change (UNFCCC) have been able to reach a common goal in limiting global warming.

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Turkey submitted its intended national determined contribution (INDC) in the run-up to the Paris conference pledging intended greenhouse gas (GHG) emissions reductions of up to 21% in 2030 as compared to a business as usual scenario. Among other options, Turkey is considering the use of market based instruments such as carbon pricing to reach its climate change mitigation targets.

Carbon pricing is increasingly used globally as a cost-effective way to mitigate climate changes, by making the costs of emission part of the economic rationale of decision makers. To support the political decision making process on market based instruments for GHG emissions reductions, Turkey received a grant from the World Bank Partnership for Market Readiness (PMR) with as core objective to produce robust analytical reports to support the decision-making process in Turkey around market based policy instruments to combat climate change. This report developing a roadmap on the consideration of establishment and operation of an emissions trading scheme (ETS) for Turkey is the first of these analytical reports, prepared under a contract that was executed between November 2015 and December 2016. This report was prepared by a consortium led by Ecofys, including also FutureCamp and LifeEnerji, further supported by Özlem Döğlerlioğlu, attorney at Law for Turkish ministry of Environment and Urbanization. The development of the roadmap benefited from intense stakeholder interaction during public and private sector workshops organized in February, March and October 2016 as well as further bilateral meetings between the ministry and several stakeholders.

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Why emissions trading

Moving to a low carbon future requires action on multiple, if not all fronts. The global energy needs to change from being predominantly fossil fuel based to an energy system based on renewable energy, energy needs to be used more efficiently throughout the economy and electrification of energy use will be needed to increase the use of non-fossil electricity production at the expense of fossil fuel use. Increasingly, jurisdictions embrace carbon pricing as a way to drive this decarbonisation. Carbon pricing internalizes the cost of the GHG emissions externality into the economic system.

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Two policies can be distinguished that deliver an explicit price on GHG emissions: a tax on GHG emissions and emissions trading. In a carbon tax system, the government sets the price that has to be paid for each tonne of GHG emissions that is covered by the tax. Market dynamics will ultimately determine the quantity of emissions that correspond to this tax level. Economic theory tells us that at least in theory all measures that have abatement cost lower than the tax will be taken. An emissions trading system (ETS) on the other hand, sets a limit (or cap) on greenhouse gas (GHG) emissions from installations covered by the system. Installations covered under the ETS need to surrender emissions allowance to cover the total volume of GHG emitted. Allowances matching the cap are initially allocated through free allocation or via an auction process.

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Allowances can also be obtained through trade between installations and other third parties. The auctions and trade between installations establishes the market price for allowances. If the cap is set well, the number of allowances is

lower than the need for allowances under a scenario without GHG abatement, thereby creating scarcity in the market. The allowances thus get a price and there is an incentive to abate emissions. The economic theory behind emissions trading (as opposed to more command and control emissions reduction policies) is that in this way the lowest cost options for emissions abatement will be found by the market that corresponds to the fixed environmental outcome that is set by the cap.

Emissions Trading in nine design steps

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This report provides a comprehensive overview of eight relevant design elements that need to be decided upon when establishing an ETS. Different design options for each of those elements are discussed based on international experiences with ETS. For each of the design elements, a checklist is included that can be used by policy makers when designing an ETS for Turkey. Inspired by the recent handbook on ETS developed by the PMR and the International Carbon Action Partnership (ICAP), the eight design decisions policy makers need to make are to:

1. **Decide on the scope**, i.e. what companies and installations are included in the ETS.
2. **Set the cap**, i.e. determine the amount of emissions allowed by the installations in the ETS.
3. **Distribute the allowances**, i.e. determine the way the emission allowances are distributed to the participants.
4. **Consider the use of offsets**, i.e. whether or not to allow emission reductions from projects outside the scope of an ETS to comply with the obligations under the ETS.
5. **Decide on temporal flexibility**, i.e. give options to participants to be flexible in the moment emission reductions are taken.
6. **Address price predictability and cost containment**, i.e. measures that intervene in the ETS by controlling either directly or indirectly the price of allowances.
7. **Ensure oversight and compliance**, i.e. making sure that everyone complies with the modalities and procedures in the ETS and that the market functions well.

8. **Consider linking**, i.e. allowing units (offsets or allowances) from other systems for compliance under the ETS.

▶ *“Policy makers also need to decide on how to engage with stakeholders, communicate on the design and build the necessary capacity both within the government and at the side of the participating companies”.*

In addition to these eight design steps, policy makers also need to decide on how to engage with stakeholders, communicate on the design and build the necessary capacity both within the government and at the side of the participating companies.

Policy mapping and policy interaction

The study then zooms in on the policy context in Turkey. If an ETS would be introduced, it would become part of an already existing energy and climate change policy mix. According to policy theory, to optimise the cost-effectiveness of an ETS, the scope of the ETS should be as wide as possible. The ETS as cornerstone policy to reduce emissions should ideally be complemented by policy support policies to reduce costs for emission reduction technologies that are needed for longer term abatement and by policies aiming to remove non-economic barriers that hamper the update of otherwise cost-effective energy efficiency and other policies. Applied to the Turkish context, this means that an ETS, if introduced, would need to be aligned with the existing energy and climate change related policy mix. In practice the means that careful consideration need to be given to possible interactions of an ETS with e.g. the renewable energy and energy efficiency legislation in Turkey. This study recommends to make this alignment of the ETS with the existing policy mix in Turkey an explicit point of attention in the further policy preparation.

It identifies three areas that require specific attention:

▶ *“This study recommends to make this alignment of the ETS with the existing policy mix in Turkey an explicit point of attention in the further policy preparation.”*

- The alignment of an ETS with existing energy efficiency policies, e.g. by re-considering specific energy efficiency targets for sectors under the ETS and by focusing energy efficiency policies on removing non-financial barriers that hamper the uptake of cost-effective energy efficiency options.
- The development of a holistic policy package for the power sector balancing multiple policy objectives by making a decision on the envisioned role of carbon pricing in the power market, on the need for additional technology support policies and on measures to avoid unwanted effects on electricity prices.

- The future of the existing voluntary offset market in Turkey given that the voluntary market has so far been dominated by renewable electricity projects that have a direct impact on the emissions that will likely be covered by a possible Turkish ETS. It is recommended not to allow new voluntary projects to start in these sectors and to find a transitional solution for existing projects that continue to generate credits.

Legal and institutional set-up

This study then provides background on the legal and institutional requirements for the set-up of an ETS, e.g. by summarizing the legal and institutional structure of the EU ETS and other existing global ETSs. The legal and institutional requirements to set up an ETS are compared with existing legislation and policy papers in Turkey, such as the National Climate Change Action Plan, the National Climate Change Strategy Document and the Environmental Law. Although the existing environmental law does already make a reference to carbon markets and could therefore in theory be the legal for an ETS in Turkey, the study concludes that new primary legislation would be needed to establish an ETS in Turkey.

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This new legislation should in itself refer to Turkey’s wider economy-wide emission reduction targets and climate change strategy as laid down in e.g. the INDC. The new primary legislation should define key design elements such as the cap-setting, the allowance allocation as well as the overall process of monitoring, reporting and verification of emissions, i.e. the compliance cycle.

“The law and secondary legislation to implement the law would be developed as part of the mandate of the Ministry of Environment and Urbanization”. The implementation could be overseen by the establishment of a new department or institute overseeing the ETS in Turkey, similar to the role of the Competent Authorities in the EU ETS.

▶ *“The law and secondary legislation to implement the law would be developed as part of the mandate of the Ministry of Environment and Urbanization”.*

In addition to new primary legislation, the study concludes that existing legislation under the mandate of other ministries, e.g. under the Ministry of Finance would need to be adapted

to accommodate the new to be established carbon market, e.g. related to the set-up of an emissions exchange and the possible classification of emission allowances as financial products.

Design of a possible ETS pilot in Turkey

Using the above context as basis, the study provides an evaluation of possible design options for an ETS pilot in Turkey using the following criteria:

- Data availability;
- Manageability of the design;
- Learning effects;
- Fitness with other design elements and other policy instruments;
- Acceptance by stakeholders/costs for operators;
- Environmental integrity;
- Perspectives for linking.

▶ *“The pilot scenario tries to limit the complexity and build the capacity of the administrator and participants in preparation for a further develop ETS beyond the pilot phase, but, requires further discussions and reconciliation among several different stakeholders.”*

Based on an evaluation using the criteria, the study concludes with a pilot ETS design that could fit the Turkish context. The proposed ETS pilot design aims to create a reference point for discussions in case Turkey politically decides to implement an ETS in future while making use of the experience gained in the MRV scheme in Turkey. The pilot scenario tries to limit the complexity and build the capacity of the administrator and participants in preparation for a further develop ETS beyond the pilot phase, but, requires further discussions and reconciliation among several different stakeholders.

The study recommends a possible Turkish pilot ETS to run for a period of two to three years, based on the following design options:

- A scope of the ETS identical to the already established MRV scheme.
- An absolute cap with a dynamic reserve to allow for growth with a fixed part of the cap reserved for existing installations with their current production levels and a dynamic part of the cap reserved for growth.

- Grandfathering based allowance allocation for existing installations with a certain share of auctioning, with benchmarks applied to new installations.
- Limited domestic offset use from existing emission reduction projects in Turkey that are registered under existing voluntary standards up to a certain % of the compliance obligation.
- Unlimited banking and borrowing within the pilot phase.
- Access to trading for operators of installations covered by the pilot ETS as well as by domestic financial institutions, with no financial derivatives allowed in the market, only spot and forward trading of allowances.
- Sanctions to be applied to ensure compliance.
- No linking of the pilot ETS with other emission trading schemes in the world.

In order to implement the pilot ETS, this study provides an action plan focused on further preparatory analyses, rule-making actions as well as further implementation steps. These steps include a high level decision to proceed with the further preparations of an ETS in Turkey, further modelling work to study to potential economic and other impacts, the drafting of an ETS law and further preparatory steps for the more technical design elements.