



A n n u a l R e p o r t 2 0 1 4



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Foreword

In the wake of a solid long term commitment in Copenhagen in 2009, it became evident that international climate agreements, at least for the nearest future, need to be based on national actions and policies rather than on a top down agreement requesting countries to take steps that are not based on already existing national policies. The Mistra Indigo climate research programme took this as a starting-point and directed its research towards bottom-up policies, how climate initiatives and policies developed on a national or subnational level could work as parts in an overall global action. The program was designed to study options and consequences of national policies, how they can be designed in order to meet long term international objectives and how they may be perceived by the international community.

After three years of research we can conclude that the starting-point and direction have been a success. We have evaluated policy options in the United States and the European Union, as being two of the largest emitters globally, and shown how these are contributing to the overall achievements on climate mitigation. We have looked carefully into the already running European Emissions Trading System (EU ETS), which is facing problems with low prices and excess of allowances, and pointed to ways to increase its function and achievements. We have also been supporting the development of regional policies as well as the federal legislation on controlling greenhouse gas emissions

in the US. We have also studied how fuel taxes in the OECD world may influence equity in various countries. When we now are approaching the important UNFCCC meeting in Paris late this year, we can see that an agreement will in large be based on what countries will offer. It is in this view important that the national commitments are transparent and that they are perceived as fair and trustworthy by the international community. Our research has been able to contribute to this.

In this annual report we have compiled some of the key outcomes during the first three years, which have resulted in short reports – Policy Briefs – aimed at supporting policy development both nationally and internationally. The six short versions of the Policy Briefs presented here are all directed to key issues for well-functioning climate policy systems and should be seen as contributions to the ongoing development of climate change policies. The full policy briefs as well as the scientific reports and references to papers that they are based on can be found at the Mistra Indigo web page www.indigo.ivl.se.

Åsa Löfgren
Scientific Director



Peringe Grennfelt
Program Director



The Mistra Indigo Year

Mistra Indigo gives strong priority to communication and dialogue activities with main stakeholders and the program scientists participate in a large number of policy and scientific processes and events. Many of these are of direct importance for the development of national and international policies. In addition, the program also organizes and co-organizes special events. In 2014 we have been involved in the following four events:

In April, Mistra Indigo arranged, together with the Mistra Swecia program and Fores, an IPCC After Work in Stockholm. The Swedish IPCC Coordinating Lead Authors Markku Rummukainen and Thomas Sterner participated and shared their views on the work behind the IPCC reports, the results they contained and what conclusions that could be drawn from them.

In May the program arranged a seminar in Brussels under the European Climate Platform (ECP) umbrella. ECP is a long-term collaboration between Centre for European Policy Studies (CEPS*) and the Mistra-funded research programs Clipore and Mistra Indigo. The collaboration has gone on for 10 years and was first part of Clipore and has then continued within Mistra Indigo. The seminar was entitled The Role of Market Mechanisms in a Post-2020 Climate Change Agreement and was directed towards international climate negotiators and other stakeholders.

* <http://www.ceps.eu/content/european-climate-platform>

In October Mistra-Indigo co-organised a two-day workshop together with the University of Gothenburg and the Swedish Energy Agency entitled Beyond IPCC – Future Paths for Climate Research. The workshop was attended by several internationally leading climate scientists and gave a unique opportunity to discuss future climate research challenges in a wide scientific and policy perspective. The outcome will be published in a climate special issue of Environmental and Resource Economics.

In mid-December, immediately after the COP20 meeting in Lima, Mistra Indigo arranged a breakfast seminar at which the outcome of the UN FCCC negotiations was presented and discussed. The event has become a tradition and has formed an occasion for national stakeholders to meet key Swedish negotiators and receive direct information from the UN process.

Mistra Fellow at CEPS

During 2014 Susanna Roth from IVL Swedish Environmental Research Institute finished her year as a Mistra Fellow at CEPS. Susanna Roth worked at CEPS with climate and energy issues, in particular the future of the EU ETS, and her work was closely related to the overall direction of the Mistra Indigo program. The CEPS placement in Brussels presented a unique proximity and access to key decision makers, on a national level as well as on EU level. Susanna Roth's stay in Brussels was fully financed by Mistra and funds were in addition to Mistra Indigo's regular budget.



This is Mistra Indigo

The Mistra Indigo research aims to understand how to design and select environmental policy instruments to support long term and cost effective global mitigation of climate change, taking into account the uncertainties in international policy development.

Our focus is set on how climate policy instruments should best be designed to promote and reinforce the efforts that are effective and politically feasible nationally, while they do not rule out a future possible coordination of climate policy between countries.

The results of our research will make recommendations and assessments useful to decision makers in both the policy making arena and within the business sector.

The program focuses on three closely linked areas:

A. Globalization of carbon markets: How to create a robust and sufficiently high price signal on carbon that can be gradually spread to the whole global economy.

B. Distributional effects of climate policy.

C. Interactions among technology policies and market failures.

As a crosscutting area, we are in all our projects studying the relation to industry and the practical application of our results on markets.

We are entirely funded by the Mistra Foundation for Strategic Environmental Research, and led by a program board with representatives from both the private, public and academic circles.

The program is a collaborative research between researchers at IVL Swedish Environmental Research Institute, the Department of Environmental Economics at the University of Gothenburg, and Resources For the Future, Washington D.C.

Communication and administration are coordinated mainly through IVL Swedish Environmental Research Institute. As for communication to the European policy arena we have a well established cooperation with Centre for European Policy Studies in Brussels where we regularly hold seminars within the European Climate Platform.

The program has a total budget of 24.5 million SEK and runs on a four year period from 2012 to 2015.

Program Organization

Program Board

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U.S Status on Climate Change

Key Messages

In the absence of national legislation, regulatory actions have placed the US on a path to approximately achieve President Obama's Copenhagen pledge for mitigation of carbon emissions. Domestic emissions are probably less than would have occurred if the Waxman-Markey cap-and-trade proposal had become law in 2010 because that program would have provided for substantial international offsets.

At the 2009 United Nations climate meetings in Copenhagen, President Obama pledged that the United States would achieve greenhouse gas (GHG) emissions reductions of 17 percent from 2005 levels by 2020. The policy mechanism imagined at the time to achieve that outcome was the Waxman-Markey economywide cap-and-trade proposal. Despite the failure of federal climate legislation, the emissions goal is within reach, at least with respect to carbon dioxide (CO₂) emissions.

By 2012, the United States had already taken actions to achieve CO₂ reductions of over 10 percent compared to 2005 levels. From that vantage point, additional actions were identified by the U.S. Environmental Protection Agency that would take the nation to GHG reductions of 16.3 percent from 2005 levels in 2020. Incremental reductions beyond the 10 percent milestone will be achieved mostly in the electricity sector, which is now the focus of the proposed Clean Power Plan that aims to reduce power sector emissions in the US by 30 percent from 2005 levels by 2030. Most of those reductions will come by 2020.

Three factors contribute to the progress in emissions reductions to date. One is secular changes in the energy economy, involving an expansion of natural gas supply and increased energy efficiency. A great deal of attention is directed toward the expanded availability of natural gas. Its role is important; however, absent further policy measures the availability of natural gas as a substitute for coal in electricity generation would account for only about one-quarter of the distance to achieving the 17 percent pledge. A second factor is the actions of subnational jurisdictions. For example, ten states have cap-and-trade policies in place, 29 have renewable energy performance standards and over half have energy efficiency policies. Cities have taken many additional actions.

In January 2015, California's cap-and-trade policy expanded to cover transportation and home heating, now encompassing about 85 percent of total GHG emissions in the state. Recently, the nine states in the Regional Greenhouse Gas Initiative increased the stringency of their emissions limits.

The third factor is regulation under the Clean Air Act. New standards for mobile sources and construction of facilities are in place already. The big missing piece has been regulation of existing stationary sources. EPA identified opportunities in six sectors, but regulations in all these sectors take time. The most important sector, though, is electricity, where the Clean Power Plan is expected to take effect by 2020. It is useful to recognize that the logic of the Clean Power Plan is to build on what subnational jurisdictions are already doing to reduce emissions in the electricity sector. The Plan identifies successes in a number of technical areas, such as power plant efficiency, renewable energy and energy efficiency, and imposes national standards that would bring other states up to "best in class" levels of performance. Our research indicates that if the Plan is implemented in a well-designed manner, it may by itself nearly achieve the Copenhagen pledge with respect to CO₂ emissions.

However, there is more work required to achieve the 2020 goal with respect to total GHGs. In early 2015 the Environmental Protection Agency identified measures to regulate emissions of methane in oil and gas production, which is an important additional step along the path to achieving the Copenhagen pledge.

Domestic emissions are probably less than would have occurred under the Waxman-Markey proposal because more than half of the reductions that were anticipated during the deliberations for that proposal would have

occurred through international offsets. Under the current regulatory approach, there is no role for international offsets. The emissions reductions are occurring on shore.

The U.S. remains on target to achieve its goals, but the outcome is not guaranteed yet. Two factors will be decisive to the outcome for the U.S. One is the successful implementation of the Clean Power Plan in the electricity sector, and the other is the promulgation of regulations aimed at other GHGs.



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What is the Value of Being First?

Perspectives from the California and Sweden Experiences

Key Messages

Multiple approaches and policy instruments have played essential roles in environmental success. Air pollution policy and climate policy requires coordinated policies in the future. Success in both California and Sweden has been built on research and development.

A comprehensive international agreement to rein in the emissions of greenhouse gases has proven elusive and the world's largest emitters have had decidedly mixed progress in terms of crafting effective national climate policies. At the same time, there are notable examples both at the national and subnational levels of pioneering climate policy initiatives. In May of 2013, a delegation of 12 academics and regulators from Sweden joined nearly 100 counterparts in San Francisco for a workshop to consider these examples.

Within their respective communities, the country of Sweden and the state of California are recognized as leaders in environmental policy. Sweden is recognized especially for its leadership within Europe with respect to water pollution and acidification in the environment. California is recognized within the United States for its leadership with respect to air pollution. Today, in the context of global climate change, the two share a leading role in the development of policy within their jurisdictions and outreach to their communities. But as leaders, they do not want to stand alone as first, and seek collaboration. The workshop demonstrated that these jurisdictions, in acting as leaders, have strong connections to their counterparts abroad.

Three themes emerged in the workshop:

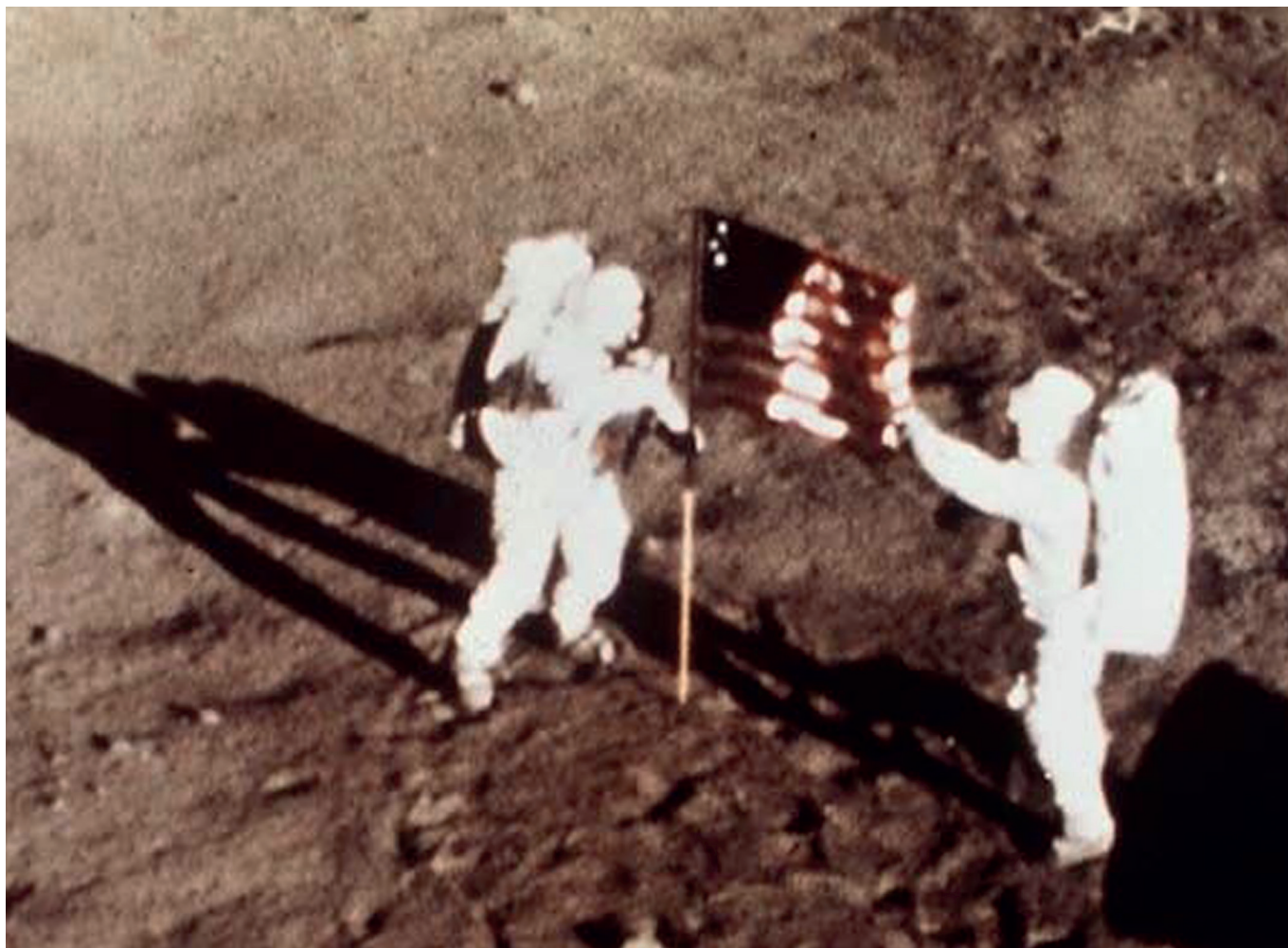
1. Multiple approaches and policy instruments have played essential roles in the environmental successes of California and Sweden. Successful environmental improvements have required persistent regulatory efforts, but policymakers have employed flexible regulations infused with incentives when possible, including the use of

prices to improve efficiency and reduce costs. Regulation has thus far played a larger role than environmental pricing (such as a cap-and-trade program or emissions taxes) and continues to do so in California.

Workshop participants noted a concern about the use of environmental prices, in that they may exacerbate emissions leakage and undermine competitiveness when there is incomplete participation among major economies. Combining regulatory policies with pricing allows prices to be set at a relatively lower level, which may help preserve competitiveness.

The data presented at the event suggest only weak evidence that environmental prices have driven innovation or technology diffusion. Nonetheless, where prices have been introduced in the form of higher fuel taxes in Sweden and elsewhere around the globe they are associated with greater fuel efficiency. Evidence at the workshop also suggests that economies continue to grow after environmental prices are introduced. Experience with regulation, which has been more common, shows abundant evidence of innovation. Engineers and other innovators respond when they are given incentives to do so. Local governments also respond to incentives in planning infrastructure. California hopes to exploit this behavior in its new and innovative climate-related land use law (SB 375).

The historic experience invites a mix of policies looking forward. However, even with a dominant role for regulation, there is the hope that the greater use of prices over time can introduce more efficiency and reduce costs.



2. There exists a crucial interaction between air pollution policy and climate policy that requires coordinated policies in the future. At the global level, short-lived climate pollution (pollution that has a short residence time in the atmosphere including black carbon from combustion of coal and biomass) is recognized as the second most important source of climate pollution behind carbon dioxide emissions. Short-lived pollution is especially damaging in the Arctic region where it contributes to the melting of snowpack and local warming. Such pollutants have been a traditional focus of conventional air pollution policy; black carbon, for example, also leads to substantial negative health outcomes, especially in the developing world.

In California, achieving goals to reduce conventional air pollution in order to achieve associated health outcomes may be harder than achieving goals to meet greenhouse gas (GHG) emissions targets and doing so will require

coordinated regulations. Workshop participants also noted that going forward, nitrogen oxides may become the binding constraint for both air pollution and climate change, with growing relevance also in water pollution.

3. Success in both Sweden and California has been built on research and development. This element of success includes natural science, technology, and social science research. In both jurisdictions, the orientation toward research and development to investigate problems and find solutions, and the reliance on science as a basis for regulation have contributed to the success of industry and a culture of innovation.

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Defying Conventional Wisdom - Distributional Impacts of Fuel Taxes

Key Messages

There are clear benefits from fuel taxation – both environmental and fiscal. High fuel taxes in all OECD countries would reduce carbon emissions from the transportation sector with 36 to 44 percent in the long run. Fuel taxes are not necessarily regressive but in many countries rather progressive or neutral. If a fuel tax is regressive, using revenue collected from the tax in ways that benefit the poor can ensure that the incidence is on net progressive

Taxing greenhouse gas (GHG) pollution is the most potent policy instrument currently available to all nations to address climate change. Fuel taxation is one of the most common forms of GHG taxation, but an argument often wielded against taxes is that they are overly detrimental to the poor. Economic research indicates, however, that this is not necessarily the case. In most developing countries, fuel taxation is quite akin to taxation of luxury goods and is in fact progressive. In the relatively high-tax context of Europe, fuel taxes are essentially neutral. In contrast, the United States is one of the few countries in the world where a fuel tax is regressive. Using revenue collected from the tax can ensure that the incidence is on net progressive even in a country such as the US, where lump-sum rebates distributed to households result in the most progressive outcome. Overall, it is clear that fuel taxes are efficacious policies that, when designed properly, can reduce air pollution and greenhouse gas emissions without exacerbating inequality between the rich and the poor.

Emissions from transport fuel are a major contributor to climate change; all transport accounted for 22 percent, and road transport specifically accounted for over 16 percent of carbon dioxide emissions in 2010 (IEA 2010). To reduce emissions, one way is to increase the cost of transport fuel, first through removing subsidies, then by instituting taxes on the carbon content of those fuels.

Concerns about negative impacts of higher gasoline prices on poor populations, especially in developing countries, are an oft-recurring part of the discussion about the effectiveness of fuel taxes as regulatory instruments. The argu-

ment for the regressivity of fuel taxes is essentially that while rich households purchase more gasoline and therefore pay more taxes in absolute terms, the fuel taxes might constitute a larger fraction of a poor household's budget, in which case the tax burden would fall disproportionately on the poor. Clearly this is an empirical question, and it might vary from country to country. Fuel Taxes and the Poor (Sterner 2012) is a book with case studies from more than 20 countries on which this policy brief is built.

The general findings from studies for developing countries included in the book are that in almost all of them, fuel taxation is in fact progressive and when looking at data for eleven developing countries it is clear that the tax burden from fuel taxes is either neutral or progressive to some degree.

In Europe, fuel taxes are high compared to other OECD countries, however, the tax burden is essentially neutral, see figure 1. On average, western European countries apply a US\$1.19 tax to every liter, compared to US\$0.35 per liter in most non-European countries (Sterner 2007) As a result, Europeans use just a fraction of the amount consumed per capita in the U.S. If all OECD countries had gas prices that correspond with those in high fuel tax countries, fuel consumption would be reduced by 35 percent and carbon emissions from the transportation sector would be 36 to 44 percent lower in the long run.

In the United States, research has identified fuel taxes as regressive (Metcalf 1999). Therefore, recycling tax revenue to protect low-income groups is an especially critical con-

cept in the U.S. If the government takes action to recycle revenue back to consumers, fuel taxes in the U.S. quickly become progressive. West and Williams (2012) found that when nothing is done with fuel tax revenue, all income classes are negatively affected, but the rich are impacted less. Luckily, there are multiple options to return revenue to households to ensure that they are not unduly impacted. They find that a labor tax cut is a progressive policy, but not enough to fully offset regressivity while a lump-sum rebate is a net progressive policy, in line with Bento et al. (2012).

To sum up; there are clear benefits environmental but also fiscal, as many countries struggle with serious budget deficits to increasing the price of gasoline in developed and developing countries alike. Yet, efforts to reduce subsidies or increase taxes invariably generate political controversy, partly due to the strong lobbying of oil companies and partly because the pain consumers feel in the short term. However, with careful consideration of impacts, it is possible to develop policy instruments that reduce inequality and benefit the environment.

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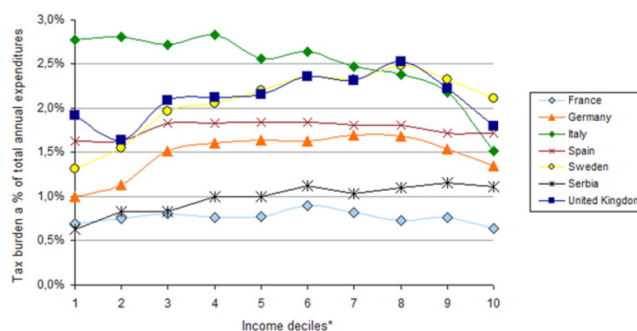


Figure 1. Fuel tax impacts by income decile for selected European countries as measured by annual expenditures.

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A Price Floor Solution to the Allowance Surplus in the EU ETS

Key Messages

An alternative to backloading and a market stability reserve in the EU ETS is the introduction of a price floor. The introduction of a price floor in the EU ETS would provide a nondiscretionary, rule-based approach that can be anticipated by market participants and thus would have a positive effect on investments in nonemitting technologies and improve overall efficiency and increase the overall welfare.

Since 2008 there has been a rapid buildup of emissions allowances for carbon dioxide (CO₂) in the European Union Emissions Trading System (EU ETS), resulting in a surplus of 2 gigatons, which is in the range of the yearly emissions covered by the scheme (EC 2012). As the surplus has grown, the price of EU allowances has fallen which inhibits low carbon innovation and investments, and poses a risk of lock-in of carbon-intensive industrial infrastructure.

The problem also has a strategic dimension. The low price on carbon may lead member states to introduce complementary policies in order to meet national climate objectives, which places an additional downward pressure on the price of allowances. Further, the auction revenues are much lower than expected, which limits the availability of financing for carbon-efficient technology. Given these developments, the role of the ETS as the central pillar of EU climate policy is put at risk. To address this risk and the oversupply in the EU ETS, the auctioning of 900 million allowances will be postponed to the end of phase 3, called backloading of the planned allocation. However, since back-loading is only a temporary measure, the Commission proposes to establish a market stability reserve at the beginning of the next trading period, in 2021. The market stability reserve would adjust the number of allowances entering the market according to the number of unused allowances already in the market.

However, another alternative to backloading and a market stability reserve is the introduction of a price floor. Unfortunately, this option has received little attention. One reason may be that a price floor has been mischaracterized as a tax, an instrument associated with political difficulties

historically (Wråke et al. 2012). The commission states that an explicit carbon price objective would alter the very nature of the current EU ETS being a quantity-based market instrument (EC 2012). However, a price floor is not a tax. If the program is well designed, the price floor should bind rarely if at all. In fact, if the price floor binds consistently, it may be taken as a signal to trigger a program review to fix structural problems in the program while preserving the value of early actions. Further, not all sources have to pay the floor price when it does bind. Some portion of the market including industry may receive allowances for free. The value of that allocation is reinforced by the price floor in the auction. The merits of a price floor are well documented in the academic literature, and we argue that this mechanism deserves more attention as an option to abate the current crisis in the EU ETS.

The obvious way to implement the price floor is to introduce a reserve price in the auction of allowances, as long as a sufficient portion of the total allowance allocation is sold through an auction (Hepburn et al. 2006). Just as in many online auctions, the reserve price represents a minimum acceptable bid. The academic literature and notorious examples of failed auctions point to a credible and efficient reserve price as an important feature of good auction design (Binmore and Klemperer 2002; Ausubel and Cramton 2004). If the market clearing price were to fall below the price floor, some portion of allowances automatically would not be sold in the auction, thereby restricting the supply of allowances and supporting the market price. Three CO₂ emissions trading programs - the northeastern US Regional Greenhouse Gas Initiative (RGGI) and those of California and Quebec - each have a

price floor that is implemented as a minimum acceptable bid (reserve price) in auctions for emissions allowances. In each program the price floor has been binding in least one auction, but only temporarily. It is widely viewed as a successful design feature that has stabilized prices and enhanced environmental outcomes.

We argue that the introduction of a price floor in the EU ETS would provide a nondiscretionary, rule-based approach that can be anticipated by market participants and thus would have a positive effect on investments in nonemitting technologies and increase the overall welfare of the EU ETS.

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Europe's Choice – Facts and Function of the EU Emissions Trading System

Key Messages

The EU ETS includes a lot of technical details and is constantly changing, limiting the debate on its future to a number of scholars, policy-makers and lobbyists. This text makes an attempt to describe the core idea and economics behind EU ETS. The system has been widely debated since its start. In the last few years most criticism has been directed towards the large surplus of allowances on the market. The proposal from the European Commission to address the surplus is a market stability reserve. Regardless of future expected reforms, emissions trading must be seen as a work in progress, which will be subject to future criticism and changes.

Given that almost half of the European greenhouse gas emissions are regulated by the EU ETS it has a daily effect on thousands of European industries. Therefore one would also think that the system is at the centre of the climate debate around Europe. The debate on the system and its future has, however, been limited to a group of scholars, policy-makers and lobbyist. This is understandable since EU ETS is crowded with technical details and subject to constant changes. In our policy brief that this summary is based on, we make an attempt to describe the core idea, the economic principles behind the EU ETS and its main design features. The report is written towards policy-makers, journalists and members of civil society who wish to engage in the debate on Europe's main policy tool for achieving its emissions reduction target in mind.

When the European Union Emissions Trading System (EU ETS) was established in 2005 it was the first international trading system for greenhouse gas emissions in the world. The system was launched with the purpose of reaching the EU reduction target under the Kyoto Protocol. Today, ten years later, it is still the flagship of European climate policy and referred to as the main policy instrument for reaching the climate objectives in EU.

Ever since it was first established it has, however, been surrounded by rumours about its imminent demise. Low prices, generous allocation, oversupply, economic downturn, industries' competitiveness, windfall profits – the list of events that has made the emissions trading subject to criticism, and even open to question about its future status, is long. Its advocates have, on the other hand, pointed to its cost-effectiveness and that the emissions reduction target for 2020

is very likely to be achieved. The EU ETS has also managed to put a price on carbon emissions which affects a large proportion of the economic activities in EU.

At the moment, the greatest criticism is directed toward the large surplus built up under the second trading period from 2008 to 2012, which will continue to keep prices low for the foreseeable future. While low prices necessarily are not a problem since an emission trading system is designed to achieve a certain emissions target at a minimum cost, it can be problematic for other reasons. It may undermine the incentives for innovation that would be necessary to achieve the EU's long-run emissions reduction goals and result in lower than expected auction revenues. Given the large surplus, many observers have pointed out the need for a reform of the system, and it is clear that reforms are likely to come. The European Commission has presented a number of structural options for reforming the system, such as expanding the scope of the EU ETS, limiting the use of international credits and increasing the climate ambition. The final proposal from the European Commission to address the surplus of allowances is to establish a market stability reserve at the start of phase 4, which would limit the total amount of allowances in circulation.

Regardless of the reforms to come, it is not far-fetched to assume that the system will be subject to future criticism and reforms. Emissions trading is still very much a work in progress, with a need to continuously fine-tune the system. The international climate negotiations, the ability to get the EU ETS back on track, the developments in China and the USA will all affect the future of carbon markets. Regardless of success or failure, emissions trading remains a policy tool that is likely to be used to mitigate the emissions of greenhouse gas emissions.



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EU ETS reform – Assessing the Market Stability Reserve

Key Messages

In our view, the most effective way to reset the market, would be to permanently remove a number of allowances from the market. The market stability reserve (MSR) adds another layer of complexity to an already complex system. This raises questions about the transparency and predictability of the system. If the market stability reserve is implemented, it should enter into force in 2017 or 2018. In addition, it is crucial that the 900 million backloaded allowances are not injected into the market in 2019, but rather moved directly to the MSR.

In light of the current state of European emissions trading, with a surplus of more than 2 billion allowance and a low price (around €6) , the European Commission has proposed using a Market Stability Reserve (MSR) to restore the function of the European Emissions Trading Scheme (EU ETS). The objective of the MSR is to regulate the surplus of allowances so that it falls within an 'optimal' band. This is achieved by adjusting annual auction volumes in a rule-based manner.

The European Commission's proposal builds on two triggering thresholds, which are based on the quantity of allowances in circulation. The first threshold is triggered when the quantity of allowances is higher than 833 million tons, then 12 percent of the allowances are removed from auctions and placed in the MSR. If the quantity of allowances is less than 400 million tons, 100 million tons are taken from the MSR and added to the auction of that current year.

The objective of the policy paper this summary refers to is to analyze how the MSR affects the function and efficiency of the EU ETS. The paper builds on previous analyses from other observers, as well as additional analysis made by our team. We conclude that making a significant volume of planned allowance allocations unavailable for buyers is generally positive. Yet our preferred choice, and in our view the most effective way to reset the market, would be to permanently remove a number of allowances from the market.

If a temporary removal of allowances is preferred, the proposed MSR has some merits. It is likely to reduce the rapidly growing surplus, and it is designed in a way that keeps the removed allowances out of the market for enough time to have a real impact on price. Yet for a number of reasons, we are less certain that the MSR as proposed by the

Commission constitute the best option for strengthening the functioning of the EU ETS because:

- The MSR does not come into effect until 2021 and hence does little to improve the current oversupply of allowances. Therefore, we suggest that the MSR enter into force in 2017 or 2018. In addition, it is crucial that the 900 million backloaded allowances are not injected into the market in 2019, but rather moved to the MSR.
- There are legitimate concerns regarding the impacts on price volatility, where some analyses show a risk of higher volatility.
- The discussion on the exact number of allowances needed for hedging obscures the fact that the overarching aim of the EU ETS is to reduce emissions in a cost efficient manner.
- The MSR is also adding yet another layer of complexity to an already complex system. This raises questions pertaining to the transparency and predictability of the system.
- Discussions about the surplus and the MSR often focus on impacts on price. If the ambition is to secure a certain price level, we note that the MSR is indirect, blunt, and uncertain. In this respect, the idea of a price collar would be a relevant alternative to investigate further.
- There is little insight into how the MSR might affect possible future linkages between the EU ETS and other markets and should therefore be evaluated further.



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Scientific Publications

*This list includes all publications from the Mistra Indigo program to date. It also includes publications that was funded by the Mistra program Clipore but was published after the closure of the Clipore program. Those publications are indicated with a * (star).*

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