For the attention of:
Clerk of the Board,
Air Resources Board 1001
I Street, Sacramento,
California 95814

Submission of comments on the California Air Resources Board proposal's for introducing a Cap and Trade Program

Sandbag is a not-for-profit campaigning organisation dedicated to achieving real action to tackle climate change and focused on the issue of emissions trading. Our view is that if emissions trading can be implemented correctly, it has the potential to help deliver the deep cuts in carbon emissions the world so badly needs to prevent the worst impacts of climate change

Through producing rigorous but accessible analysis, we aim to make emissions trading more transparent and understandable to a wider audience than those already involved in the market. In particular, we hope to shed light on the challenges the EU Emissions Trading System faces in becoming a truly effective scheme for cutting emissions and to advocate the solutions that can help it to work better.

We have been carefully monitoring the implementation of the EU's Emissions Trading System for the last two years and amongst numerous policy reports[1] have published two reports assessing its performance[2]. In addition, we have taken the publicly available data and made it more accessible by creating Google maps[3] of all participating installations showing how much they emit, how many permits they have received for free and where they are buying their offsets from to comply with their caps.

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[1] http://www.sandbag.org.uk/reports/
[2] See 'Cap or Trap?', Sept 2010, http://www.sandbag.org.uk/site_media/pdfs/reports/caportrap.pdf and 'EU ETS S.O.S', July 2009, http://www.sandbag.org.uk/site_media/pdfs/reports/Sandbag_ETS_SOS_Report.pdf
[3] See http://www.sandbag.org.uk/maps/emissions/ and http://www.sandbag.org.uk/maps/offset/

We have been following the implementation of emissions trading in California with great interest and were delighted that the recent Proposal 23, that sought to delay its introduction, was roundly defeated.

We read with interest the documents issued at the end of October setting out proposals for the detailed implementation of the emissions trading system. Ahead of the public hearing on December 16th, we would like to offer the following comments based on our experiences in Europe.

In summary, we believe many aspects of the proposals are good and must be maintained, including the proposal to capture 85% of CO2e within the program, the creation of a strategic reserve and the combined use of auctions (with a price floor) and benchmarks for free allocations. We do, however, have reservations about three important design features, which we recommend are addressed as soon as possible. Firstly, low ambition, a return to 1990 levels by 2020 is not sufficiently ambitious; secondly, the lack of a continuing cap after 2020; and thirdly, the overly generous provision for offsetting.

Comments on proposals

1. Positive elements of the proposals

There are many features of the proposals we support that should be maintained and defended.

1.1 Good coverage of gases and sectors

The inclusion of 85% of emissions, by 2015, including transport and heating fuels, is excellent and better than the EU's model. We would strongly advocate that transport fuels should have been included in the program from the start, while emissions from trade exposed, heavy industries should have been brought in at a later date. This would have made defending the proposal against claims of competitiveness impacts easier and should also have made agreeing a more ambitious target easier. Additional costs in electricity and fossil fuel markets can be passed through since the demand cannot easily be met by imports from uncapped states/countries or, where it can, the requirement to comply with caps can also be applied to the imported commodity.

1.2 Covers imports of electricity from out of state

This is essential to maintain competitiveness in California and again is another improvement on the EU system where imports from neighbouring countries are not addressed giving rise to opposition in certain trade exposed Member States.

1.3 A clear emissions reduction trajectory to 2020

The clarity of targets for the period 2012-20 is good, however, as described below, the fact that there is no continuation beyond 2020, and no sign of Federal legislation to replace it, is a serious weakness and one that needs to be addressed as soon as possible.

1.4 Strategic reserve created to moderate supply of permits.

This is a very welcome design feature that helps to maintain control over the supply of permits in the event of unforeseen circumstances. A market with variable demand but fixed supply is at risk of price crashes and spikes and the proposed reserve is a sensible suggestion for mitigating these risks. We consider the overall balance of supply and demand in the proposed system is such that it is far more at risk of price crashes than spikes and that it is unlikely that the reserved allowances will be bought.

1.5 Some auctioning and floor price established for the auction.

We support floor prices in auctions (though not in the market as a whole) and have suggested that the EU should also adopt such a policy. However at $10 a tonne, the level of the floor is currently too low to provide an adequate investment signal. We consider that this should be subject to regular review and increased as soon as possible. The use of revenues from auctions to mitigate price impacts on consumer costs is very sensible. Grants for deployment of low carbon technologies can also play a role in buying down the costs of higher cost abatement options but care should be taken not to

unduly distort the abatement market by appearing to pick winners. The market would achieve this more efficiently than a Government program, if changes can be made to introduce stronger ambition, long-term certainty and less offsetting. Given our concerns regarding these points highlighted in Section 2 below, the use of auction revenues to spur investment assumes more importance.

1.6 Free allocation by benchmarks, which update to take account productivity.

The decision to allocate by benchmarks from the outset, rather than according to historical emissions trends, is very welcome and should help to prevent the accrual of 'hot air' in the system, which currently bedevils the EU system. The fact that benchmarks are tied to productivity, within an overall fixed cap, is also welcome as this again prevents rewards being handed out to those who are merely cutting back on production and helps to incentivise genuine investment in abatement. Officials should be wary of entering into lengthy discussions with industry about the number and nature of the benchmarks. There will be a tendency for every subsector of industry to plead for special treatment, proliferating the number of benchmarks, and arriving back at something close to historic grandfathering, which is clearly sub-optimal.

1.7 Provision to set aside/cancel permits to protect voluntary uptake of renewable electricity tariffs.

This is a welcome provision, continuing the principle set out in the Regional Green House Gas Initiative. The EU has failed to address the question of how to ensure caps do not prevent voluntary reductions, made beneath the cap, from delivering additional emissions savings. We will continue to point to developments in the US in our calls for similar measures to be introduced in Europe.

1.8 The market is open to public to buy and cancel permits

In the EU we provide a facility for companies and individuals to buy and cancel emissions rights. We believe this is an important feature of emissions trading and one that should be preserved. Civil society should always have the right to enter the market to buy down the cap if it considers the volume of emissions rights granted to be too high to address adequately the risk of global climate change.

1.9 Annual reporting requirement on all participants

As mentioned below we would have preferred annual compliance periods but the fact that annual reporting is still required of all participants helps to mitigate these concerns. It is essential that emissions data is made publicly available on an annual basis as soon as possible to enable timely scrutiny of the participants' behaviour in the scheme. Please also see our additional comments on data collection and publication in Section 3 below.

2. Areas of concern

2.1 Low overall ambition (return to 1990 by 2020 as set in AB 32)

According to the IPCC, to address adequately the risk of global climate change, all developed economies should be seeking to deliver reductions in emissions in the range of 25-40% by 2020 compared to 1990.

Under AB 32, California must reduce greenhouse gas (GHG) emissions to 1990 levels by 2020. To contribute to this target the emissions trading program is expected to reduce GHG emissions between 18 and 27 $MMTCO_2e$ in 2020. We understand the proposed annual rate of reduction of the cap is an approx 2% decrease until 2015, rising to 3% from 2016-2020. In 2020, the proposed cap will be 74.6 $MMTCO_2e$ lower than forecast emissions in capped sectors.

In the documentation describing the proposed program it is also estimated that:

"the total capped sector abatement curve shows approximately 108 $MMTCO_2e$ of abatement available in 2020, with over 32 $MMTCO_2e$ of that abatement having a negative cost per metric ton. The least expensive abatement opportunities are from the transportation sector. These include regional transportation targets (SB 375), biofuels, and high-efficiency vehicles. Approximately 76 $MMTCO_2e$ of abatement potential is available at a positive cost-per-metric-ton."

A return to 1990 levels by 2020 is far from ambitious. The proposed caps are not set in line with the full potential for cost effective abatement within the State and also includes generous offsetting provisions from the outset (see below) which will significantly weaken investment signals in capped sectors.

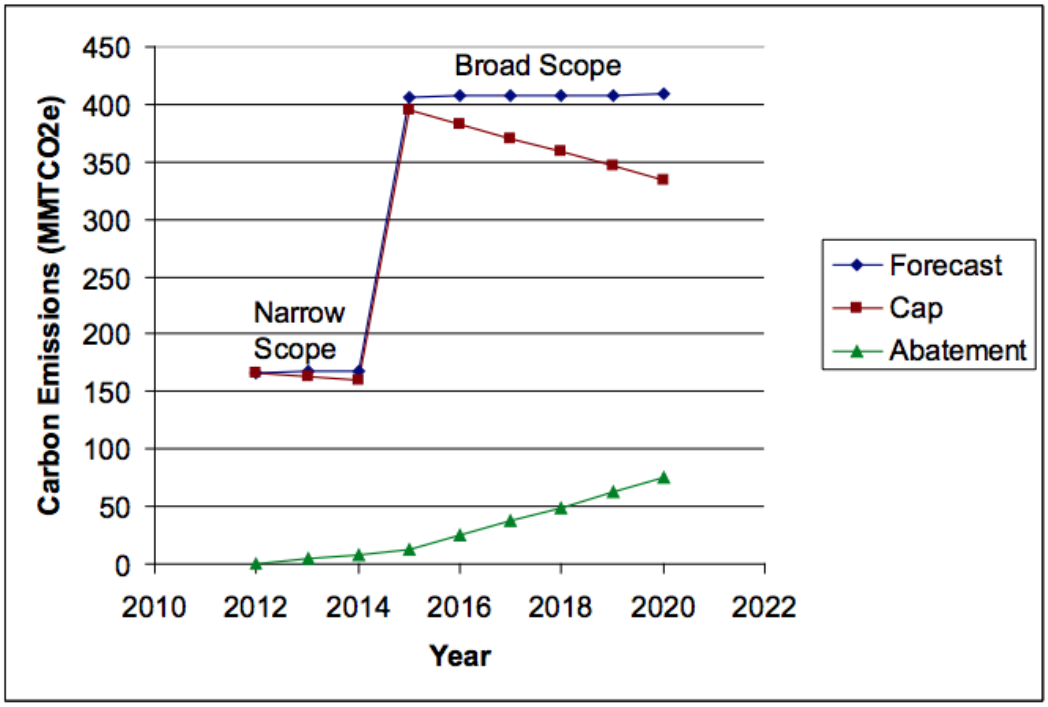
The EU ETS has been in operation for 5 years and it has been bedeviled by low ambition which has resulted in caps sitting above actual emissions in all but one year of its operation. Recently the economic downturn has exacerbated the oversupply of tradable permits but our analysis indicates that, even without this unexpected turn of events, the EU had created and distributed far too many permits to its heavy industries whilst giving reasonable targets to the power sector. This cross subsidy from power consumers to heavy industry has significantly reduced the efficiency of the system and weakened investment signals.

On the East coast of the US the Regional Greenhouse Gas Initiative has also been negatively affected by an oversupply of permits resulting in very low prices.

By not requiring sufficient effort from participants, the Californian trading system risks following in the footsteps of these existing programs. This would significantly undermine the potential for emissions trading to deliver least cost abatement in capped sectors and further damage the carbon market's

reputation as an effective climate policy. This is particularly of concern in California, as the regulation currently operates over a very short time period which already significantly diminishes the investment signal to industry (see 2.2 below).

Figure V-1: Baseline Emissions, Cap Level, and Abatement Required to Achieve the Cap



Abatement potential.

Table V-1: Baseline Emissions, Cap Level, and Abatement Required to Achieve the Cap.

	GHG Emissions ($MMTCO_2e$)		
Year	Forecast for Sources in the Cap-and-Trade Program	Cap	Annual Abatement Needed
2012	165.8	165.8	0.0
2013	167.3	162.8	4.5
2014	168.1	159.7	8.4
2015	406.7	394.5	12.2
2016	406.9	382.4	24.5
2017	407.6	370.4	37.2
2018	407.6	358.3	49.3
2019	408.4	346.3	62.1
2020	408.8	334.2	74.6

2.2 No trajectory for emissions reductions beyond 2020

The most serious concern relating to the current proposals relates to the lack of a cap post 2020. We understand that AB 32 the legislation, which underpins the cap and trade proposal, contains targets for 2020 but not beyond. The fact that the proposed cap and trade system follows this and caps currently end in 2020, is a serious problem, which will undermine the seriousness with which participants view the regulation. With some sectors only entering the system in 2015 they are being given only a 5 year timeline of required reductions. This is not a long enough payback period to justify investment in emissions abatement and will likely mean that participants view the regulation as a requirement to offset and little else. There will certainly be little incentive to overcomply and bank since the value of banked credits will likely fall to zero in the event of the regulation stopping in 2020.

The EU trading system does not have an end point with the reductions of 1.74% per annum continuing indefinitely. This creates a much higher degree of certainty for participants and gives a sufficiently long time period that any over allocation in the early years can be 'soaked up' by the expectation of serious constraints being applied in the future.

We recommend that at the earliest possible opportunity new regulations are agreed that create targets beyond 2020, either in the form of 2050 targets or as a continuing annual reduction rate with no sunset clause.

2.3 Too much offsetting allowed (8% of emissions)

The published proposals state that:

"The proposed program includes provisions that would allow a maximum of 232 MMTCO_2e of offsets through the year 2020. This limit will be enforced through a limit on the use of offsets by an individual entity equal to 8 percent of its compliance obligation. This double the initial proposed limit of 4%.

The rationale for this is the proposed regulation would establish an Allowance Price Containment Reserve in which ARB will place a total of 121 million allowances at the beginning of the program. By removing these 121 million allowances from the program, the level of stringency is increased, which could result in higher allowance prices. To address this, staff proposes that additional offsets, equal to the amount of allowances that are placed into the Reserve, be allowed in the program. This means that a maximum of 232 million offset credits may be used over the life of the program. This results in an offset limit in which a maximum of 8 percent of an individual entity's compliance obligation can be met using offsets."

Offsetting is not as robust a policy for tackling climate change as cap and trade mechanisms since the use of baseline and credit programs to generate offsets has many potential weaknesses, in particular, the difficulty in establishing additionality and of accurately projecting a baseline. In addition,

offsets create only a supply of reductions, there is no demand, ie a requirement to deliver a net reduction in emissions, created in offsetting sectors. Offsets should therefore only be used in cap and trade programs as a guard against high prices, in the event of carbon abatement projects in capped sectors proving to be more expensive or more difficult to uncover than initially projected.

Access to offsets should be limited and always supplemental to action in the capped sectors. However, the price of offsets is generally lower than the price of the allowances created under the cap, and as such they are often the first option for firms buying their way to compliance. If the price of offsets is sufficiently low then it is economically rational to use of the full offset allowance first and only then consider abatement options within capped sectors. We have witnessed this in the EU where even though firms find themselves with an excess of allowances above their cap they nevertheless purchase offsets either so they can bank forward their allowances or so that they may sell the more expensive allowances to make a profit[4].

Combined with low ambition and a short timeframe, it is our expectation that the generous offset provisions proposed will mean that cap and trade in California will operate as a mandatory offset program for capped participants, stimulating little or no investment in abatement within capped sectors.

In addition, we note that the decision to increase the offset provision has been justified in relation to the creation of the strategic reserve of allowances. However, the creation of a reserve is not the same as tightening the cap since it does not permanently remove the permits from the program, merely places a higher price on them. The increase in the offsets provision is therefore equivalent to a significant decrease in overall effort in the traded sector. Also, the current proposals state that the placing of the permits into the reserves will be done gradually over time, whereas, the increased offset provision is in place from the start. This is clearly imbalanced. If the proposals are not to result in significantly weakened price signals, then the additional offset provisions, if introduced, should similarly be phased in over time.

2.4 Non-equivalence issues ie inclusion of forestry and potentially REDD credits as offsets

It is stated that offset credits must be real, additional, permanent, verifiable, enforceable, and quantifiable.

Current proposals include a 'positive list' of eligible projects with provisions for more to be added over time. The four project types eligible from the start are:

- **U.S. Ozone Depleting Substances (ODS) Projects Protocol:**

Destruction of ODS from refrigerant and foam-blowing agents sourced from and destroyed within the United States. Production of ODS is being phased

[4] See 'International Offsets and the EU ETS', July 2010, http://www.sandbag.org.uk/site_media/pdfs/reports/offset2009.pdf

out through the Montreal Protocol, but there are significant banks from which these gases will be emitted in coming years unless they are destroyed. ODS destruction has stratospheric ozone benefits in addition to climate benefits.

- **Livestock Manure (Digesters) Projects Protocol:** Capture and destruction of methane from anaerobic manure treatment and/or storage facilities on dairy cattle and swine farms within the United States.
- **Urban Forest Projects Protocol:** Urban tree planting projects by municipalities, educational campuses, utilities, and partner organizations to sequester carbon.
- **U.S. Forest Projects Protocol:** Increasing sequestered carbon or avoided GHG emissions due to forest management activities in three project types: reforestation, improved forest management, and/or avoided conversion within the United States.

To address the problem of guaranteeing the permanence of forestry credits a Forest Buffer Account will be set up.

While we support the idea of a positive offset list, we are concerned that the inclusion of credits from land use and forestry does not adequately address the question of how best to maximize storage of carbon in natural sinks, and, at the same time, diverts resources away from reducing fossil emissions and investing in a low carbon economy.

One of the most difficult issues in creating an effective carbon market is ensuring there is the correct balance between supply and demand of allowances/credits. The capacity for carbon sinks to both remove and contribute carbon to and from the atmosphere is considerable. Their introduction into the carbon market as a form of offset risks creating an over-supply of accredited reductions whilst doing nothing to increase the overall demand to cut emissions. And yet it is precisely this that must be urgently increased to answer the risk of global climate change.

An additional problem with sinks in the carbon market is the equivalence (or lack of equivalence) between different sources of greenhouse gases. There are two main anthropogenic drivers of climate change – the release of fossilized carbon through the burning of fossil fuels which contributes an additional load of carbon to the atmosphere, and changes made to land and oceans which alter the level of carbon sinks in the biosphere. These two problems inter-relate in complex ways and each needs to be urgently addressed if we are to stabilize our climate within a safe temperature range.

By mixing measures to address the reduction in biospheric sinks with measures to reduce the unabated burning of fossil fuels we risk not adequately addressing either problem. Much less is known about emissions arising from changes in the biosphere but they are likely to be highly dynamic and responsive to the impacts of climate change. Quantification and demonstration of equivalence over time is therefore difficult to establish. In addition, the volume of potential gases stored in natural sinks (including all existing forestry, soils and carbon storage in oceans) is such that it is unlikely

that regulation of sources of fossilized carbon emissions will ever be sufficient to adequately address this aspect of the problem. A separate mechanism is required to address this and measures to reduce emissions from fossil fuels should remain focused on that issue alone. An optimized program to address changes in biospheric sinks would regulate those companies, such as logging firms, large scale plantation owners and industrialized agricultural firms, to make them responsible for protecting and restoring our land based sinks.

Sectoral offsets

We support the development of sectoral offsets where reductions are generated over and above business as usual projections and above basic minimum standards of performance (ie benchmarks). Sectoral offsets enable a move away from baseline and credit programs to sectoral cap and trade systems which help to guarantee reduced volumes of emissions and establish a carbon price.

3. Additional recommendations regarding data

Sandbag has been able to play an important watch dog role for the EU ETS because data is made publicly available. However, the data that is released is often not complete and the format in which it is provided is not easy to use which creates barriers for increased scruntiny of the performance of the scheme.

Our recommendations for the optimally provision of public data in relation to the trading scheme are as follows:

- All relevant data should be made available at an installation level – this enables the maximum levels of transparency
- company ownership of installations, including parent company ownership, should be published
- installations should be grouped and identified by sectors of the economy – at the most disaggregated level possible ie by product type or service.
- data about installation level emissions (current and historic) and any free allocations should be released
- the use of offsets for compliance should be recorded separately from the use of allowances
- details of the projects generating the offsets used for compliance at an installation level should be made publicly available
- all benchmarks used for free allocations, including adjustments for variations in production levels, should be made public
- the total volume of emissions issued by auction and held in reserves should be regularly published (at least once a quarter)
- volumes of allocations removed in response to voluntary uptake of green tariffs or through voluntary cancellation should be published regularly (at least annually)
- changes in scope between compliance periods should be clearly labeled and made public so that an accurate picture of aggregate

emissions over time can be developed. If new entrants are not clearly labeled in order that they may be disaggregated from existing participants, aggregate data becomes distorted and of limited use in analysis of performance.
- Any transactions between installations that involves the transfer of flue gases for fuel, accompanied by allowances, should be recorded and made publicly available. This does not happen currently in Europe and makes analysis of performance under the scheme unnecessarily difficult.

Data should be provided in a database download dump that would ideally be in the native database language SQL. Alternatively, Excel or CSV spreadsheets should be published for each dataset, with a unique identifier for each installation/company etc that is used throughout the dataset, so that the dataset can be imported into a database.

4. Concluding remarks

The fact that Californian citizens voted in favour of maintaining legislation to introduce cap and trade provides an important mandate in favour of climate mitigation action. We urge the Californian Air Resources Board to revisit the proposals currently outlined to ensure that the people of California have indeed voted for a proposal worth saving.

At present the low level of ambition, the absence of targets beyond 2020 (combined with the late start for key sectors), and the overly generous provision for offsets calls into question whether the proposals will deliver an adequate investment signal. There is a very real danger that once again these cap and trade proposals will result in very low prices and deliver little more than a mandatory offsetting requirement would have.

California has the advantage of being able to learn from mistakes made in the EU and on the East Coast and current proposals indicate that on some issues that has indeed been the case. However, it remains the case that ambition is low, targets too short term and the offsetting provisions too generous. We hope that improvements to these elements of the current proposals can be included before the program is due to start in 2012, or, failing that, as soon as possible thereafter.

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