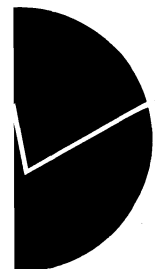


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**Nordic Negotiations on CO₂
Emissions Reduction**

The Norwegian Negotiation Team's
Considerations



Torstein Bye and Snorre Kverndokk

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Abstract:

This document presents the Norwegian team's considerations during a negotiation of tradable CO₂ emissions reduction between Denmark, Sweden, Finland and Norway. The negotiations were part of a research project headed by Peter Bohm at Stockholm University. The aim of the project was to study the benefits of joint implementations in the Nordic countries compared to traditional unilaterally commitments to reduce CO₂ emissions. When the restrictions through different target levels vary between countries and the marginal cost curves differ, all parties should benefit from trading emissions reductions. Several questions are important to answer like: i) Is the market big enough to create an efficient solution or are there some big country actors that could influence heavily on the solution, ii) which country benefits the most from tradable quotas, and iii) how do negotiators trade to reach a market equilibrium? This paper only addresses the Norwegian team's considerations. The last chapter reports all trade that took place during the negotiation process that lasted for 4 days. The complete report on the project will be discussed by an expert panel and will be released by the co-ordinators in early 1997.

Keywords: Nordic countries, CO₂ emissions, negotiations, experimental economics.

JEL classification: C9, D6, Q4.

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1. Some introductory remarks about the project

The Nordic Council of Ministers' Ad Hoc Group on Energy Related Climate Issues decided to launch an experimental study of Joint Implementation among Denmark, Finland, Norway and Sweden as an example of CO₂ emissions reduction trade among a small number of countries assumed to be committed to stringent CO₂ emissions targets for the year 2000. The targets are that the individual countries' CO₂ emissions from fossil fuel use do not exceed their 1990 levels. The individual country within the frame of the project can meet its target entirely on its own or partly by purchasing contracts of emissions reductions from other participating Nordic countries. The latter option is attractive to the extent that it is less costly than making the same volume of reductions at home. A country selling (profitable) emissions reduction contracts would have to make emissions reductions in the year 2000 equal to its own emissions target *plus* contracted additional emission reductions commitments.

The basis for mutually profitable emissions reductions trade between two countries is that their marginal abatement costs differ at their respective target levels for emissions in the year 2000. These costs reflect not only estimates of feasible minimum costs of domestic emission reductions, but also taken into account constraints on the feasible reduction strategies, e.g., regarding employment and income distribution. Since all participating countries have some version of a CO₂ tax system in operation now and most likely, with some possible modification already determined, also for the year 2000, the basic instrument for adjusting the emissions in each of the four countries can be taken to be changes in the (weighted average of the) CO₂ tax required for reaching the specific emissions level for that year. That is, the exemptions, specific rules or regulations that exist now for the CO₂ tax systems in each country are taken as given for the year 2000, and the required emissions reductions are attained by adjustments in the CO₂ tax rate or weighed average of CO₂ tax rates (if these differ between sectors). In this sense, (average) domestic CO₂ tax rates can be regarded as the only policy instrument these countries will use to reach the emissions targets.

The driving force behind emissions trade negotiations, if they had been real, would be for each country's negotiators to try to minimise the country's net costs of meeting its international CO₂ emissions commitments. When the negotiations are hypothetical, as here, a feasible incentive mechanism which as much as possible mimics this driving force needs to be instituted. In the version of such a mechanism to be used here, the countries deposited, prior to the start of the negotiations, their estimated social emissions reduction cost function (curve or table, to be specified), i.e., the relationship that guides the negotiators in each country, to a neutral party, to be released confidentially to an international evaluation team after the negotiations are completed. This team will evaluate the emissions trade agreements reached against this background and publish its findings of how relatively successful the participating countries have been in their trade negotiations.

The evaluation team consists of

Professor Scott Barrett, London Business School, London

Dr. Jean-Charles Hourcade, CIRED-CNRS, Paris

Professor Robert Stavins, Harvard University, Cambridge, MA

all of whom are internationally recognised experts in the field, acknowledged by their status as so-called lead authors of the Intergovernmental Panel of Climate Change (IPCC) Working Group III Second Assessment Report (just published).

The countries' negotiation teams are listed in Appendix 1.

2. Some basic information

Before starting the negotiations each countries team had to give away some country specific basic information about business as usual (BAU) emissions in the year 2000 and target levels for the emissions in that year (which was set equal to the emission level in each country), see Table 1. In

addition to the information given in this table each country also had to inform about the BAU GNP level in the negotiation year 2000, see Table 2. The reason why the GNP information was needed is still unclear to the Norwegian team.

Table 1. Emissions levels in each country in the BAU scenario and targets. Million tonnes CO₂

	BAU	Target	Reduction
Denmark	53.8	52.1	1.7
Finland	60.0	54.0	6.0
Norway	41.0	35.6	5.4
Sweden	62.9	61.3	1.6
Total	217.7	203.0	14.7

Table 2 Real GDP development for the period 1990 to 2000

	1990	2000
Denmark	100	123
Finland	100	112
Norway	100	133
Sweden	100	111

As a background for their negotiations the Norwegian team collected some information about the respective negotiating partners CO₂ tax levels in 1994, see Table 3. This gave us some approximate information about the start out level of marginal cost for each country. However, as can be seen from the table each country heavily discriminates between sectors in their taxing system so the information used were only a guesstimate of the average tax level in each country based on Table 3.

Table 3. Assumed high and low tax rates in the BAU scenario (Base year rates). NOK/ton CO₂¹⁾

	High	Low	Exceptions
Denmark	110 (17)	50 (8)	Yes
Finland	50 (8)	20 (3)	Yes
Norway	360 (55)	150 (23)	Yes
Sweden	350 (55)	70 (11)	Yes

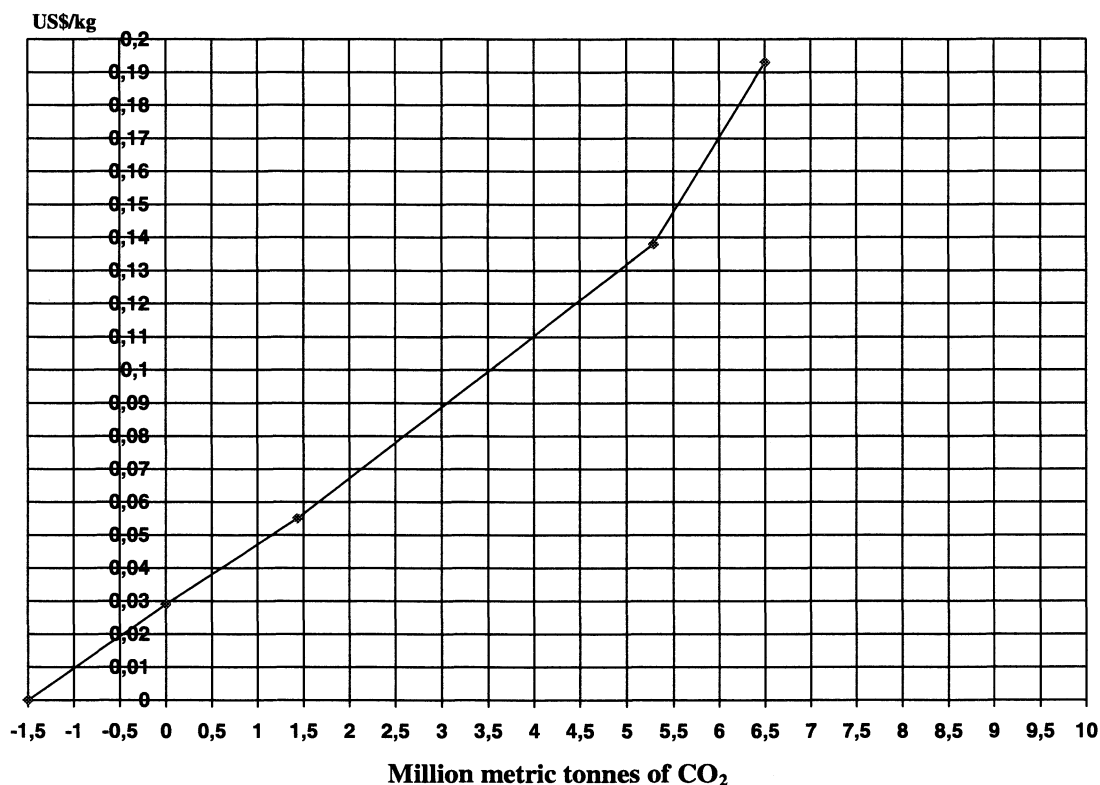
¹⁾Approximate US\$/ton CO₂ in pharantesis (6.5 NOK/\$)

3. The Norwegian BAU CO₂, GNP and marginal abatement cost curve

The Norwegian BAU (business as usual) GNP and emissions and the marginal cost curve are calculated on the basis of information from the Norwegian Green Tax Commission, see NOU (1996:9). The BAU emissions are from the Commission's report table 11.3 and GNP is based on tables 11.11 and 11.14.

The Commission presented several calculations of the effects on emissions from different carbon taxes in Norway. We used simulation results from the Norwegian macro economic model MODAG (see tables 11.8 and 11.5 in the appendix to chapter 11 in NOU (1996:8)). For a further introduction to the model, see Bowitz (1995). The marginal cost curve, cfr. Figure 1, includes both the marginal cost of reducing the emissions from the BAU level to the target level, a marginal cost estimate of reducing the emissions below the target and the benefit from increasing emissions above the BAU level (i.e., implicit costs (today's taxes) to reduce emissions to the BAU level).

Figure 1. Marginal reduction cost for Norway. BAU emissions = 0 reduction



Total costs for Norway of reducing the emissions in 2000 by 5.4 million tonnes CO₂ unilaterally is calculated to \$ 456 million, 1995 prices. This equals the area under the marginal cost curve from BAU, i.e., emissions reductions equals 0, to a reduction of 5.4 Mton which is where we reach the Norwegian target, see Table 1. The marginal cost of reaching the target then increases from approximately 30\$/ton (at the BAU level) to approximately 140 \$/ton (at the target level).

4. The negotiation process

The negotiations took place via telefax, and started on Wednesday 18th of September 1996 at 9:00 and went on to Monday 23rd of September at 15:00. The negotiation process included bids, asks and acceptances. You sent a **bid** if you wanted to purchase emission permits, an **ask** if you wanted to sell and an **accept** if you had agreed upon a contract (actually there were several additional procedures that had to be followed as for instance *confirming* the receipt of asks and bids, *offering to bind a preliminary contract* and so on. These formalities are not important and are therefore omitted below). A binding contract could be annulled at the cost of a penalty of 15 per cent of the contract value up to Monday September 23rd at 15.00, and 30 per cent thereafter.

1st round of negotiation for the Norwegian team - Wednesday 18th of September

Bid: Norway wants to buy 1 million tonnes CO₂ at 40\$/t from Sweden.

Bid: Norway wants to buy 3 million tonnes CO₂ at 40\$/t from Denmark.

We assumed that Denmark most probably was a selling country, and wanted to test their willingness to negotiate huge quantities. Sweden is probably close to Norway with respect to marginal cost, and we wanted to test this hypothesis. Finland probably has low marginal cost, but faces large reductions obligations. We exclude them in the first round.

Ask: Sweden replies that they want to sell 1 million ton CO₂ at 55 \$/t to Norway
We should test Sweden's strategic behaviour closer. Denmark shows no willingness to negotiate with Norway at this stage. The price may be too low? We should show Denmark a willingness to pay more, however reduce the quantity in the next bid to insinuate a low marginal cost curve.

Bid: Norway wants to buy 1 million ton CO₂ at 50\$/t from Sweden.

Bid: Norway wants to buy 2 million tonnes CO₂ at 50\$/t from Denmark.

The average marginal cost for the fifth million ton in Norway is close to 130 \$/t. The average marginal cost for the third million ton is approximately 90 \$/t. If both Denmark and Sweden accept our bid we have to consider the potential to reduce some of the quantity at a lower price level by accepting a major part but not all.

Acceptance: Norway and Sweden agree that Sweden sells 1 million ton CO₂ to Norway at 50\$/t. Norway benefited approximately \$ 80 millions compared to abating at home.

Denmark shows no willingness to negotiate with Norway at this stage:

- Denmark is obviously expecting Norway to rise the bid since they probably know that we have the highest marginal cost. Our guess is that Norway and Denmark should benefit from a bilateral agreement. Denmark may want a huge part of the total benefits from trade and decides to wait.
- Norway may counteract this squeeze by increasing the negotiation activity against Sweden and also include Finland in the negotiations.

Bid: Norway wants to buy 1 million ton CO₂ at 52\$/t from Sweden.

Bid: Norway wants to buy 1 million ton CO₂ at 50\$/t from Finland.

Ask: Finland wants to sell 1 million ton CO₂ at 65\$/t to Norway.

Ask: Sweden wants to sell 1 million ton CO₂ at 65\$/t to Norway.

Sweden and Finland obviously want to find out somewhat more about the derivative of our cost curve, confer Sweden's reaction to our first bid in the first round. We decide to exclude Sweden in this round and test Finland's willingness to sell. We also exclude Denmark for a while.

Bid : Norway wants to buy 1 million ton CO₂ at 55\$/t from Finland.

Acceptance: Finland and Norway agree that Finland sells 1 million ton at 55 \$/t. Norway benefited approximately \$ 60 millions compared to abating at home.

We now know that Denmark has to sell below 50-55 \$/t if they want to sell anything at all. Let them sweat.

The market closed at 15:00 on Wednesday 18th of September. The total gain from our negotiations compared to a national quota reduction at this stage is approximately \$ 140 millions.

2nd round of negotiation for the Norwegian team - Thursday 19th of September

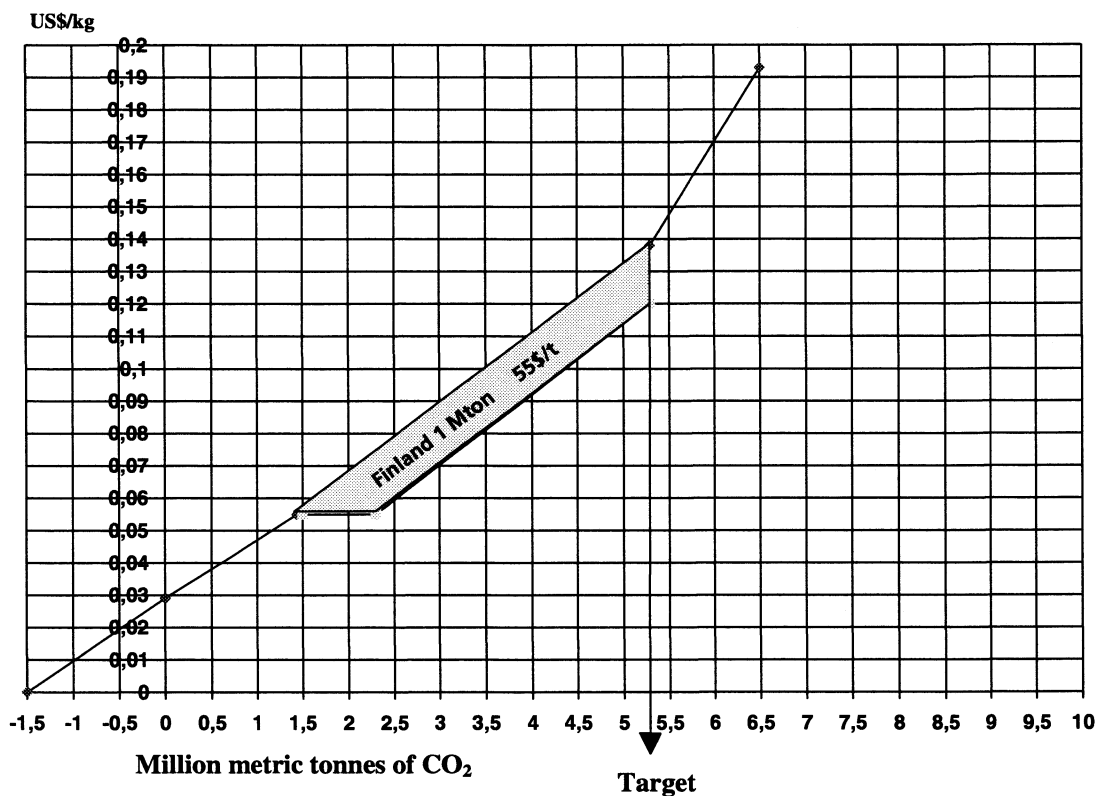
Our strategy now is to try to tell Denmark that we have closed some contracts to reduce the upper level of our marginal cost curve, i.e., that they should participate in what we consider a low price level market. We do so by bidding a lower price than the highest bid the day before, and decide to make a bid to Denmark for 0.5 million ton at 45 \$/t.

Intervention:

Friday morning the Secretariat closed the market because they were not sure that all countries had given the appropriate information about their respective cost curves to the expert panels secretary (Iceland). At the same time they allowed all binding contracts to be annulled at no cost. This is a severe intervention in the market and the penalty should probably not be relaxed (at least not all). The new information allowed for a larger regime of quotas to be negotiated which should press the prices down. However it also allowed to include the existing tax regime in the marginal cost curve which should put an upward pressure on prices. We did not complain but contacted the Secretariat to discuss the intervention.

The market was closed from 9:00 to 12:00 on the 19th of September. In that period Sweden annulled the contract of selling 1 million ton CO₂ to Norway for 50 \$/t. Finland did not break the contract with us. The intervention then reduced our gains from the first day of negotiations from \$ 140 millions to approximately \$ 75 millions. A reduction in the value of the Swedish agreement by \$ 80 million, and an increase in the value of the Finnish agreement by \$ 15 millions, see Figure 2. At the same time Sweden had gained information about the Norwegian willingness to pay and Norway's implicit bidding to other countries at no cost. This may have severe implications for both the negotiations and for the interpretation of the negotiation results.

Figure 2. Reduction in total costs for Norway. Purchasing 1 Mton CO₂ from Finland for 55 \$/t



We now had to reconsider our strategy before any new action took place. Our earlier strategy against Denmark will probably not work since the market are set back to scratch.

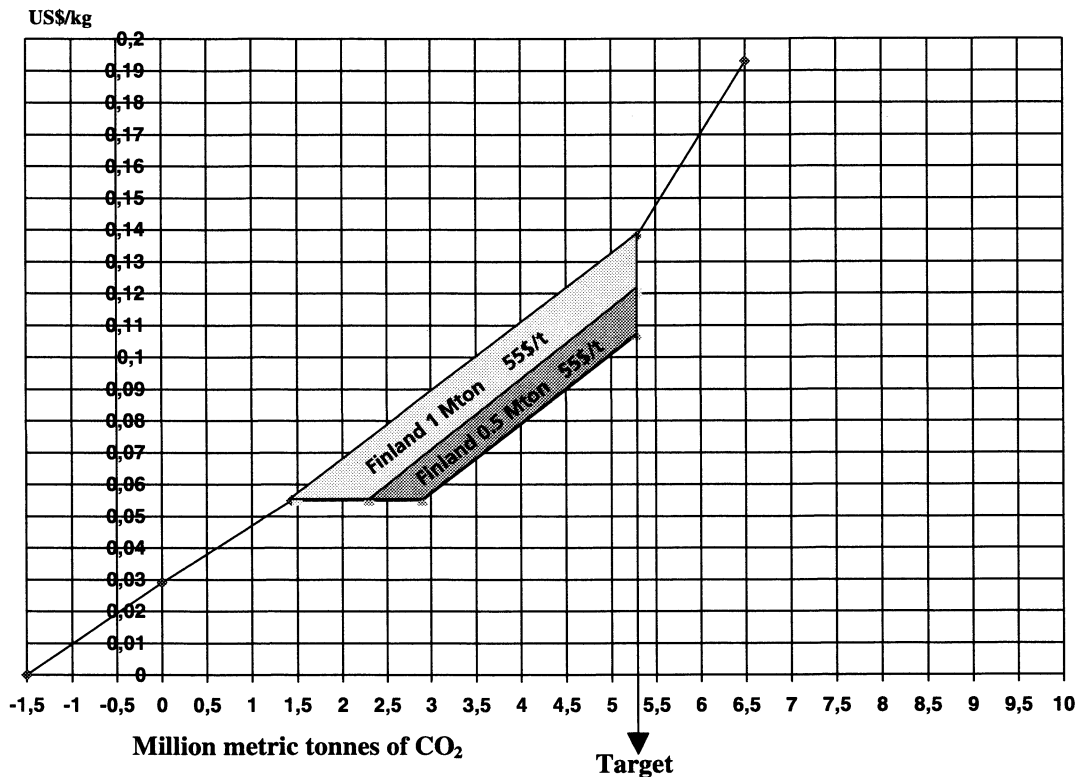
One way of testing the new market regime is to try to make a contract with Finland at a price level close to the earlier contract that they did not annul.

Bid: Norway wants to buy 0.5 million ton CO₂ at 55\$/t from Finland

Ask: Sweden asks Norway to buy 1 million ton CO₂ at 80\$/t

Accept: Norway and Finland agree that Finland sells 0.5 million ton CO₂ at 55\$/t. The gain for Norway from this deal is approximately \$ 30 millions, see Figure 3.

Figure 3. Reduction in total costs for Norway. Purchasing an additional 0.5 Mton CO₂ from Finland for 55 \$/t



The new strategy seems to work out well so far, although a lower bid to Finland might have been better since they accepted at once. Sweden obviously has increased its marginal cost curve and offers to sell at a very high price. They have obviously not checked with Finland. We should still negotiate with Finland.

We still plan to keep Denmark in the shadow. At the same time we should probably tell Sweden that the market price is low compared to their offer so that they don't bid too high and put a pressure on the market.

Bid: Norway wants to buy 1 million ton CO₂ from Sweden at 51\$/t.

We should probably make another effort to get a larger quantity from Finland.

Bid: Norway wants to buy 0.75 million ton CO₂ from Finland at 52\$/t.

The next bid should probably be to Denmark.

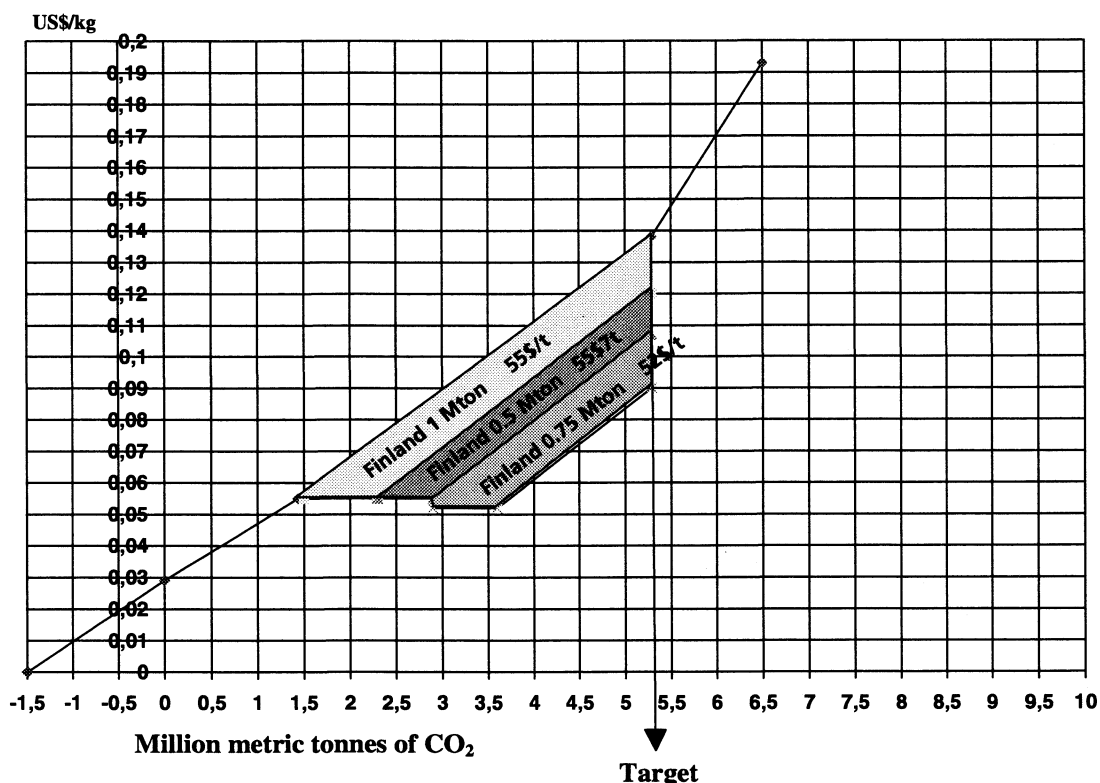
Bid: Norway wants to buy 0.75 million ton CO₂ from Denmark at 52\$/t

Ask: Sweden wants to sell 1 million ton CO₂ at 78\$/t .

Accept: Norway and Finland agree that Finland sells 0.75 million ton CO₂ at 52\$/t .

This last contract reduces Norwegian cost by approximately \$ 25 millions, see Figure 4. The market price level then is below 55\$/t. Sweden is way off by an ask of 78\$/t. Our strategy still seems to be successful. Shall we wait for Denmark's response or should we still play with Finland? Denmark obviously has problems with their fax since they do not confirm reception of our bid. Let's try another shot against Finland. Maybe Sweden and Denmark have found each other at a higher price level than the contract price between Norway and Finland? Obviously no one is bidding at a higher price level than Norway against Finland.

Figure 4. Reduction in total costs for Norway. Purchasing an additional 0.75 Mton CO₂ from Finland for 52 \$/t

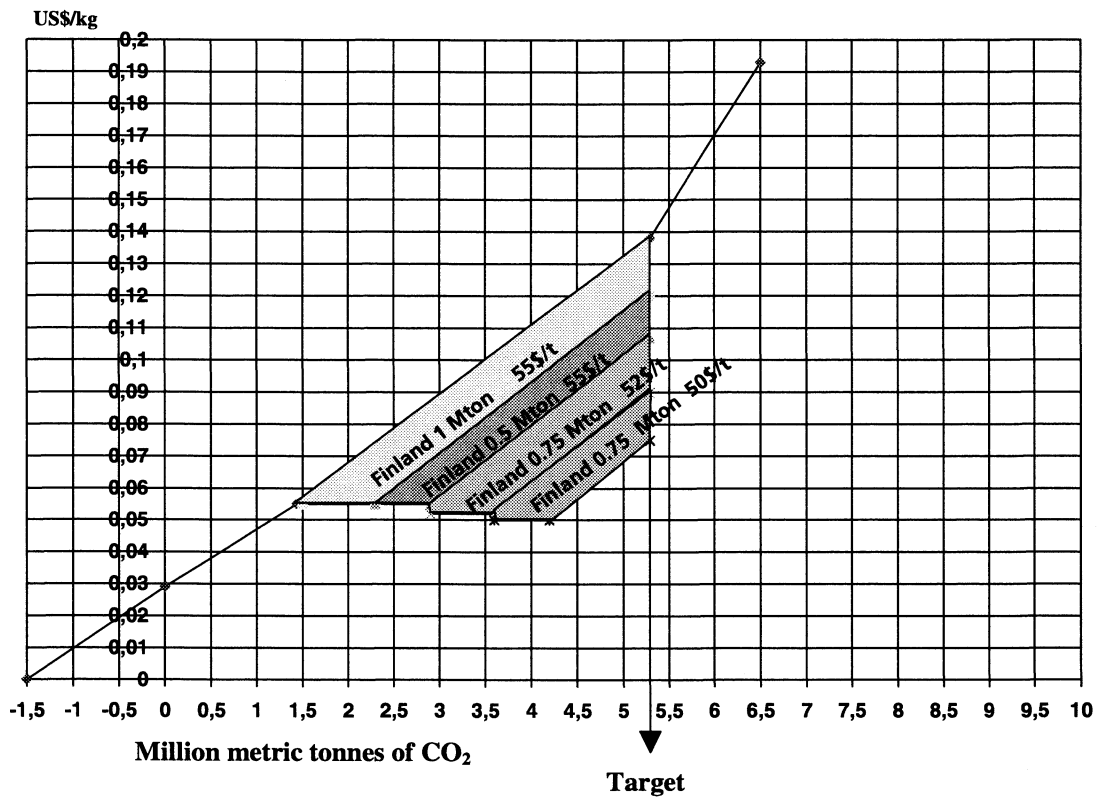


Bid: Norway wants to buy an additional 0.75 million ton CO₂ from Finland at 50\$/t.

Accept: Finland accepts, and sells 0.75 million ton CO₂ to Norway at 50\$/t.

Another gain for Norway of approximately \$ 25 millions, see Figure 5. Our hypothesis about a separation of the market may be relevant. Is four market participants a too low number of countries to obtain perfect competition, especially when marginal cost rates diverge very much? Should we send another message to Sweden and Denmark to tell them that our willingness to pay is still low - thereby check the other part of the market - and then try to negotiate further contracts with Finland?

Figure 5. Reduction in total costs for Norway. Purchasing an additional 0.75 Mton CO₂ from Finland for 50 \$/t



The market is closed - let's see tomorrow morning.

3rd round - Friday 20th September

Our last acceptance with Finland were dismissed because it came to late (later than 15:00 on Thursday). We have reconfirmed our last bid against Finland but have problems to get contact.

Bid: Denmark wants to buy 0.5 million ton CO₂ from Norway at 30\$/t

What is Denmark up to ???

Ask: Denmark wants to sell 1 million ton CO₂ to Norway at 60\$/t

What is going on in Denmark ???

Still no reply from Finland. We should probably test Denmark's willingness to sell to find out what's going on.

Bid: Norway wants to buy 0.75 million ton CO₂ from Denmark at 45\$/t

At last (10:30) Finland responses to our confirmation at 9:07 of yesterday's bid. They confirm the earlier agreement and finally binds the contract. The gain for Norway is approximately \$ 17 millions.

Finland seems to have low marginal costs, and we try another bid.

Bid: Norway wants to buy 0.5 million ton CO₂ from Finland at 48\$/t.

Finland does not seem to be interested at this price level. We should try to do the final trade to close our last triangle.

Bid: Norway wants to buy 0.7 million ton CO₂ at 52\$/t from Denmark.

Bid: Norway wants to buy 0.6 million ton CO₂ at 51\$/t from Finland.

Ask: Denmark wants to sell 0.7 million ton CO₂ at 59\$/t.

This could be an acceptable agreement, however we have plenty of time to get something more out of the market.

Bid: Norway wants to buy 0.6 million ton CO₂ at 54\$/t from Denmark.

Ask: Denmark wants to sell 1 million ton CO₂ at 58\$/t to Norway.

Bid: Denmark wants to buy 0.25 million ton CO₂ from Norway at 32\$/t.

Denmark does not understand that increasing the price lowers the quota we want to buy. At the same time they make an ask at a very low price once again. What are the Danes thinking about???? Why do they want to sell and buy from the same country?

Ask: Sweden wants to sell 0.5 million ton CO₂ at \$63/t.

It does not seem to be much to gain in the market now. What is Denmark trying to do ???
Let's try a bid against Finland at 55\$ on Monday morning.

4th round Monday 23th September

The Secretariat did not accept our last binding of a contract of 0.75 Mton at 50 \$/t because Finland responded to late (after 62 minutes instead of 45 minutes). We could not accept this and did send a letter of complaint to the Secretariat, se Appendix 2.

After some time the Secretariat, Norway and Finland agreed to accept the contract. The negotiations went on - Norway's strategy now was to try to close up on the last minor triangle of our marginal cost curve. Denmark and Finland seems to be the most probable partners.

Bid: Norway wants to buy 0.5 Mton CO₂ from Denmark at 56 \$/t.

Bid: Norway wants to buy 0.5 Mton CO₂ from Finland at 56 \$/t.

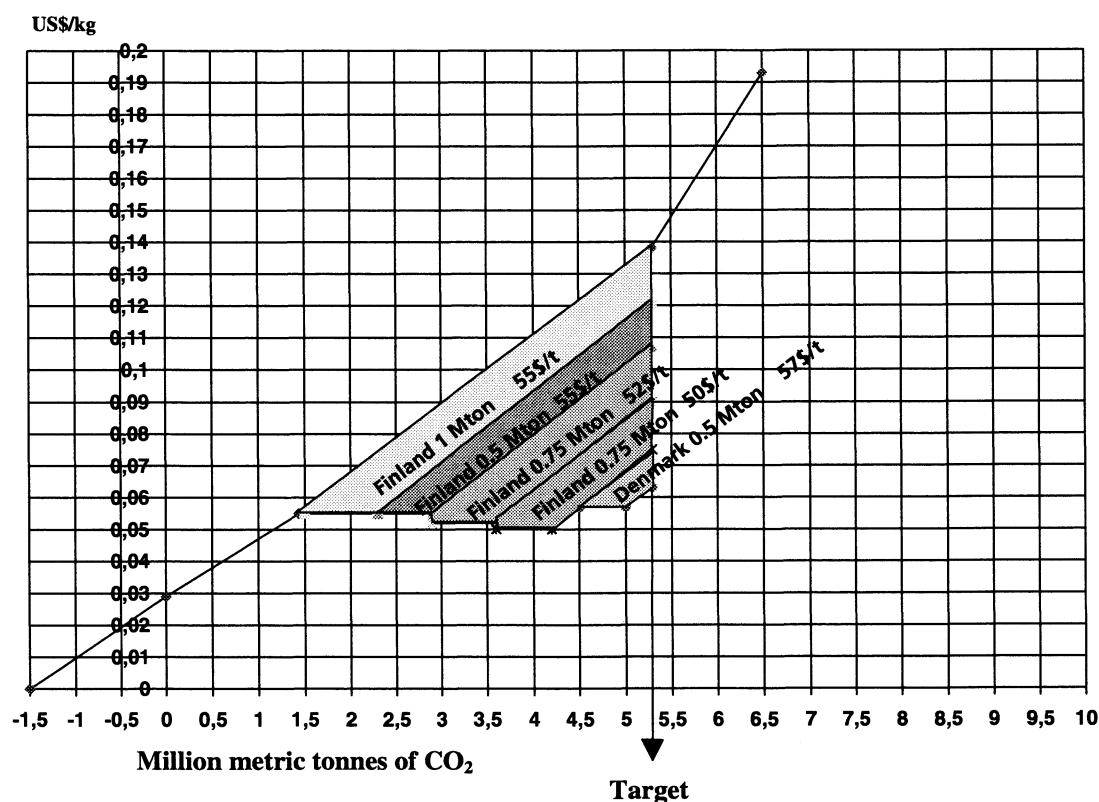
Finland does not respond to our bid. They may have reached their own marginal cost curve or gained by trading with Sweden. The last hypothesis is not likely since we try to negotiate with both Denmark and Finland at the same price level.

Ask: Denmark wants to sell 0.5 Mton CO₂ to Norway at 57 \$/t.

Acceptance: Norway and Denmark agree, and Denmark sells 0.5 Mton CO₂ to Norway at 57 \$/t.

This almost closes the beneficial gap for Norway, see Figure 6, and we stop further negotiations.

Figure 6. Reduction in total costs for Norway. Purchasing 0.5 Mton CO₂ from Denmark for 57 \$/t



However, Sweden is still active in the market:

Bid: Sweden wants to buy from Norway 0.5 Mton at 47 \$/t.

Ask: Sweden wants to sell to Norway 0.4 Mton at 60 \$/t.

Why does Sweden think that anybody will agree on this and just transfer some money to them?

The negotiations were stopped on Monday 23rd September at 15.00.

After market - Tuesday 24th September

In the morning on Tuesday 24th September, the Secretariat proposed an «after market» for further emissions trade. This was based on the tradition in international negotiations where a Secretariat often tries to mediate between parties when ordinary talks do not lead any further. Therefore, the Secretariat proposed a deal of 0.1 Mton at 55.5 \$/t. According to the Secretariat, this is a quantity that existing parties have expressed an interest in trading, a seller at \$57 and a buyer at \$54. The price is an average of these two prices. If a seller and a buyer accept the trade suggested, there will be a second proposal by the Secretariat. If more than one seller and/or buyer accept, «first come first served» is the guiding principle. If either an accepting seller or an accepting buyer is missing, the «after market» will be closed. The parties are given 30 minutes to respond.

As we still have a little potential for cost reductions under trade, this is a good offer for us.

Acceptance: Norway accepts the Secretaries bid, and want to buy 0.1 million metric tonnes of CO₂ emissions for 55.5\$/t.

However, after a while the Secretary sent a new message to the negotiation teams. Since no seller came forward in response to the trade proposal, the «after market» is closed. Thus, we could not buy the favourable quantity. The cost reductions would anyway not have been large.

5. Summary of binding deals for Norway

The following binding deals for Norway prevailed at the closing time of the market:

- Finland sells 1.0 Mton for USD 55/t to Norway 14:20 Sept. 18
- Finland sells 0.5 Mton for USD 55/t to Norway 13:34 Sept. 19
- Finland sells 0.75 Mton for USD 52/t to Norway 14:31 Sept. 19
- Finland sells 0.75 Mton for USD 50/t to Norway 11:57 Sept. 20
- Denmark sells 0.5 Mton for USD 57/t to Norway 11:28 Sept. 23

The total cost of unilaterally reducing the Norwegian CO₂ emissions by 5.4 Mton compared to the BAU emissions level in the year 2000 is calculated to \$ 456 millions. The negotiations reduced this number to \$ 286 millions. That is the negotiation process reduced the total cost for Norway by 37 per cent, which clearly shows the potential cost savings of joint implementation.

6. Some concluding remarks before we know the outcome of the negotiations

1. We had some problems with our own fax (a restricted international line connection) at the beginning of the process which did delay our entry in to the market. This late access to the market did not seem to cost us anything.
2. In a larger market with a lot of participants using a fax machine takes too long time for the market to be well functioning. Some countries did have problems with their faxes - which slowed down the market actions.
3. The market closed down because of some misunderstanding of which marginal cost each country should have reported before the negotiations started. This should be made more clear and tested in advance in another project. The penalty for annulling a contract were dismissed for a period of time because of this. The decision to remove the whole penalty should be discussed. Countries reporting the right figures from the start were «punished» through this decision.
4. Apparently the Norwegian team found the approximate equilibrium price level through two to three bids despite the fact that the market was interrupted. This fast identification of the approximate equilibrium price surprised us.
5. The Norwegian team managed to reduce the costs of reaching the target by 37 per cent. This clearly shows the importance of joint implementation and tradeable quotas to reduce overall emissions abatement costs.
6. In the early phase of the negotiations we thought that the Nordic market were separated in two parts. We guess (before we know the correct answer) that Finland and Norway traded quotas at a low 50 \$/t level, while Denmark and Sweden negotiated at a high 50 or low 60 \$/t level. This may suggest that 4 parties are a too few to make the market function perfect. Still we assume that all parties gained from the trading of emissions quotas. Compared to a well functioning market we guess that Denmark and Norway favoured the most, while Finland and Sweden had some «losses». Finland may have had some losses compared to a potential trade with Sweden and Denmark at a higher price level.

7. The total trade of quotas reported by the Secretariat

The Secretariat reported the total trade of CO₂ emissions quotas on Tuesday 24th September at 11.52. The following trade had been registered

Finland sells	1.0 Mton for	US\$ 55/t	to Norway	14:20 Sept. 18
Finland sells	0.5 Mton for	US\$ 55/t	to Norway	13:34 Sept. 19
Finland sells	1.0 Mton for	US\$ 52/t	to Sweden	14:04 Sept. 19
Finland sells	0.75 Mton for	US\$ 52/t	to Norway	14:31 Sept. 19
Finland sells	1.0 Mton for	US\$ 48/t	to Sweden	10:23 Sept. 20
Finland sells	0.75 Mton for	US\$ 50/t	to Norway	11:57 Sept. 20
Denmark sells	0.5 Mton for	US\$ 57/t	to Norway	11:28 Sept. 23

Totally sold to Norway 3.5 Mton CO₂ at an average price of 53.5 \$/t

Totally sold to Sweden 2.0 Mton CO₂ at an average price of 50.0 \$/t

We concluded wrong about the separation of the market. Actually Sweden and Norway traded at the approximate same prices against Finland. Norway's average price were about 3.5 USD above the Swedish average price. The most surprising, however, is that Denmark did almost not participate in the market. Despite the fact that they only had to reduce their emissions level by 1.7 Mton to reach the target and that their initial CO₂ tax level in average was approximately 10-15 \$/t, they did not sell any quota except 0.5 Mton to Norway at 57 \$/t. We cannot believe that Denmark's marginal cost curve is that steep.

Latest

The Secretariat reports that almost 90 per cent of the possible gains from trade were realised during the negotiations.

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Appendix 1

The countries' negotiation teams are

Denmark

Jörgen Abildgaard
Henrik Lawaetz
Camilla Rosenhagen

Finland

Seppo Oikarinen
Jaakko Ojala

Norway

Torstein Bye
Snorre Kverndokk

Sweden

Håkan Heden
Maria Gårding
Göran Lagerstedt
Thomas Levander
Jonas Victorsson
Annika Olofsdotter

Appendix 2

To the Secretariat of the Nordic negotiations on CO₂ reduction trade

copy: Finland

Oslo, 23. September 8:00

Letter of complaint!

The Secretariat does not accept the binding of a contract between Finland and Norway where Finland sells 0.75 Mton for USD 50/t because the acceptance note were delivered to late.

The Norwegian offer to Finland to bind the contract was sent 10:45 Sept. 20. The Finnish acceptance to bind the contract was sent to Norway 11:51 (12:51 Finnish time). The final settlement of this contract took place because the Secretariat did not accept an earlier agreement between the Norwegian and the Finnish team from September 19. concerning the same amount of CO₂ emissions. The reason was that the finally binding of the contract was fulfilled after the market were closed at 15:00. This may have caused some misunderstanding between the two negotiations team making it hard to re-establish the offering and binding process.

Between the Norwegian reoffer to bind the agreement at 10:45 and the Finnish acceptance note at 11:51 the 20. September we were in contact with the Secretariat because we had some problems in establishing contact with the Finnish team. Within this time we also did send a simple note to the Finnish team, advised by the Secretariat, to check if they did get our first offering note. Obviously our reminder and the Finnish reply to our offer did place another confusement to the story. Anyway, at 14:08 Friday 20. September (15:08 Finnish time) we had a note from the Finnish team, confirming that they have already sent an acceptance note to bind the contract of selling 0.75 Mton at 50\$/t to Norway. Through both Thursday and Friday both negotiation teams have shown firmness in the willingness to bind this contract.

Since we had no immediate complaint from the Secretariat we had no reason to believe that the contract was illegal. Actually we went on with our negotiations searching for another contract. We had a reason to believe that the Secretariat would closely follow the re-establishment of this contract because of the earlier refusal and contact between the Secretariat and the negotiation teams. We expected that the Secretariat would react immediately if something were missed in the following up procedure. Therefore it seems kind of odd when the Secretariat inform both parties, Friday 14:54, just before the closure of the market, and some 3 hours after the acceptance of binding from Finland to Norway, that they can not accept the binding.

We therefore deliver this letter of complaint and invite the Secretariat to reconsider its decision and accept the binding of the contract between Norway and Finland concerning a Finnish sale of 0.75 Mton to Norway at 50\$/t. Since the market place is opened again at 9:00 Monday 23. September we expect that the Secretariat informs both parties about their final decision in time so actions may be taken when the market opens.

*Torstein Bye
«Norway»*

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