develop your energy network

YES-DC NEWSLETTER

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The Newsletter is distributed by YES-DC to their members. Subscription is free of charge and the newsletter can also be downloaded from our website. For any further questions or suggestions feel free to contact us.

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Chairman´s Foreword

We started a new year with a new board, many new members, and ever more new challenges. We have set out to face some of these challenges, by working to fulfil the promises we made in our vision document. The promise to connect us with a larger, international network, to make it easier for our members to find and connect to each other, to further professionalize YES-DC, and to transform our structure into one capable of taking responsibility and creating opportunity to help shape our own future. Developments we saw as necessary to meet the needs of young energy specialists everywhere, which are ever growing in ambition. Ambitions that will drive us further than ever before in securing a stable energy future for everyone. A gratifying though challenging task we stand for in the coming forty years, as is recognized by more and more of our fellow countrymen.

But we are not the only ones facing challenges. There are many challenges across our borders, to which people around us might not all be as aware, but on which crucial action needs to be taken. Two articles in this newsletter address these issues, and the influence of the CDM in this; on the potential it offers – or should offer – for development in developing countries, and the limitations. To follow that up the DEO day is organized in little over a week from now; an entire convention on financing modern energy services for developing countries. A truly remarkable program and even more remarkable speakers are lined up. An event that surely shouldn't be missed (and I'm not only saying that because we organize it ☺).

As time passes by on our way to our fifth bi-annual DEO day, the Netherlands is approaching another important date. A date that will partially define into what extent our ambitions can be met. After the 9th of June the few privileged people that we elect to govern our nation are facing the challenge on how to secure the energy future of our country, and perhaps even continent. We all realize that these are crucial times for a sustainable and secure energy future, and thus these elections might be, more than ever before, a crucial point in our path to what is going to come. Decide for yourself what you think our future should look like and how we can reach that. Is this something that will be solved by the market? Do we need more (or less) nuclear energy as debated in our April meeting? Is there a need for more off-shore windmill parks as the one we will visit on the 11th of June? Or should we even embrace a Desertec like program, as discussed in November of last year? Crucial questions that need answering, and to which we all can and should use our knowledge, and help decide what is best. We have a vital task in this, as we are the generation that has to make this all happen in the coming forty years (and beyond). So get involved, vote, join our think tank team, and use your knowledge to help us all secure exactly that future that we deem important. And in the meantime, enjoy this newsletter.

Hope to see you all soon!

Pepijn van Kesteren
Chairman

Impacts of the financial crisis in renewable energy project development under the Clean Development Mechanism

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In this article are shown part of the results of a master thesis research work[1] addressing the "impacts of the financial crisis in renewable energy project development under the clean development mechanism". One of the conclusions of the research was that low CER prices was the main factor hindering CDM renewable energy projects to take off. Other variables like internal and external financial resources, cost of capital and cost of technology appeared less relevant in comparison to CER price.

This was not an obvious finding since in many capital intensive projects, as renewables are, the revenue CER brings is so tiny that a change in CER prices would seem insignificant compared to the total investment costs. Some interviewees even said changes in the CER price were minor because its impact on the internal rate of return of projects was marginal.

Tracking the news releases, the most pessimistic forecast could neither anticipate such a sharp drop of the CER price nor its impact. A drastic fell of secondary CER prices by nearly 75% over a period of 7-8 months was recorded. Prices fell from the record prices of nearly €24 in July 2008 down to as low as €7 on February 2009.

It appeared that low CER prices prevented Emission Reduction Purchase Agreements (ERPAs) to materialize. These agreements are contracts that serve as a source of future income. Therefore, when these contracts are not being closed, project financing weakens. This conclusion was drawn based on correspondence found in information in the media, interviews with experts and trends in the CDM pipeline. The number of projects entering the CDM pipeline dropped significantly during the first quarter of 2009, when CER price reached its lowest point.

This drop of CER prices affected the take off of projects in several ways: (1) by making some projects financially unviable because of reduced revenue; (2) by making some projects technically unviable because additionality cannot be demonstrated; (3) by generating distrust from creditors and making capital raise more difficult; and (4) finally by shifting buyers purchase preferences from primary CERs to secondary CERs.

It was also researched the influence of the uncertainty about the outcome of Copenhagen. At the beginning of the research it was assumed that expectations about the post Kyoto regime would only have a negative impact on project development. Indeed, there were records that the uncertain future of the carbon market after 2012 deterred buyers and developers from generating credits after that year. However, it was also observed that expectations about a new climate regime could also trigger the development of some non very attractive projects. For example one interviewee said his company was investing in a geothermal project in Africa (in expectancy of technology-transfer funds).

On the other hand, some other interesting findings appeared. They seem paradoxical because they show the *low hanging fruit principle* to fall short some times to explain the market behavior (at least during the economic recession in 2009). This principle states that market actors pursue the cheapest options for emission reduction. Thus, it seems that the number of projects in the CDM pipeline is related to the maturity of the technology of each type of energy. Hydro appears to be the most

[1] *This study was conducted as part of the final research project for obtaining the title of Msc in Environmental and Energy Management at the University of Twente. The sources of information for this research were: written media reports, eleven interviews with experts in CDM project development and the CDM official database kept by UNEP Risoe, known as the CDM pipeline. This research deals only with the impacts observed before the Copenhagen Conference of the Parties took place in December 2009.*

mature, best known, least risky and the cheapest technology. It is followed by wind, which although being still a new technology has reached a level of reliability and affordability that make it a very attractive investment option. Biomass is in the boundaries of becoming a mature technology.

However, the trends drawn from the CDM pipeline data illustrates that during the year 2009 the most mature technology does not show the best performance in number of projects sent to validation. It would be expected that the cheapest, best known and therefore least risk prone technology (hydro) would be impacted less negatively by the economic recession than the other technologies. This did not appear to be the case.

The number of hydro, wind and biomass projects entering the CDM pipeline underwent a remarkably decrease during the first quarter of the year. In the second and third quarter, only wind showed signs of recovery. In contrary to the overall trend, the number of solar projects increased in 2009. New CDM solar projects passed from 12 in 2008 to 19 in 2009.

Furthermore, it appeared that the regions with the highest bulk of projects (Asia-Pacific and then Latin America) underwent a more drastic fall in number of RE projects sent to validation than Africa. Actually, the African continent did not show a decrease in projects being validated, its number remained stable in 14 projects in 2008 and in 2009. Moreover, taking the total number of CDM projects in Africa (renewable and non-renewable) it shows an increase from 25 projects in 2008 to 39 in 2009.

All in all, it seems that the crisis affected the most the types of projects that are meant to satisfy most of the demand: the cheapest and most common type of renewable energy (hydro); and the region that produces most of the CERs (Asia-Pacific). It also gives the impression that as the general demand fell, these kinds of projects suffered the most. However, the *high hanging fruit* projects seem to have been driven by different drivers than the ups and downs of the global economy and more research is needed to identify such drivers.

Making CDM happen in Africa

Adeline de Lamar, Green Ambition – SQ Consult Associate. adl@greenambition.net

There are currently more than 2,201 registered CDM projects in 63 developing countries, and about another 1,999 projects in the project validation/registration pipeline[2]. The projects registered to date are expected to generate more than 1.7 billion certified emission reductions (CERs) by the time the first commitment period of the Kyoto Protocol ends in 2012, each equivalent to one tonne of carbon dioxide. However, only 2% of registered projects are located in Africa (i.e. 44 projects and 122 projects in the pipeline), expected to generate 10.5 million CERs by 2012.

According to World Bank estimates, Africa has the potential for more than 3,200 clean energy projects which could provide more than 170GW of additional power generation capacity and thereby reduce about 740 million tons of greenhouse gases per year[3]. Even greater emission reductions can

[2] *UNFCCC, CDM Statistics, 14/05/2010, http://cdm.unfccc.int/Statistics/index.html*
3 Ndongsok, CDM in Africa: Facing the Hurdle of Conventional Finance, 16/09/2009 http://www.ecosystemmarketplace.com/pages/dynamic/article.page.php?page_id=7128&section=news_articles&eod=1

be gained in the agriculture and forestry sectors, or by gas flaring and waste management technologies. Despite this great emission-reduction potential, African countries have so far failed to benefit much from the CDM. So what would be the reasons Africa is trailing?

In March 2010, the 2nd African Carbon Forum was held. Over 1,000 participants attended the conference to discuss obstacles such as lack of financing, lack of experience and technical skill, land titling and monitoring challenges, and the complexity of Clean Development Mechanism (CDM) rules[4].

Many optimistic outputs raised up from this forum, including:

- "It's obvious the capacity-building is paying off", "now we see a higher level of understanding, we see real eagerness to get involved, and plenty of business being conducted" said John Kilani of the UNFCCC secretariat[5];
- "There is a growing number of projects in Africa and a growing number of countries hosting projects," "some project developers are even prepared to pay a premium for offset credits originating from Africa", "they are confident in the long-term growth prospects for CDM on the continent", said Mr. Kilani;
- The Programme of Activities (PoA) is widely seen as one of the ways to get African countries more effectively involved in the CDM[6]. However, barriers are currently preventing its implementation and it is essential to overcome them. "To make it a success there is a need for targeted capacity-building, both for DNAs and project developers," said John Christensen;

Regarding the project financing problematic, seeking appropriate financial support from domestic banking institutions and/or multilateral financial organizations is problematic and must be approached carefully. Therefore dedicated funds have been set up and more investors are identifying their projects with high development benefits (e.g. BioCarbon Fund supported the Africa's first large-scale forestry project, Ethiopian Humbo Regeneration Project recently registered under the UNFCCC which as been presented by World Vision and the World Bank during the forum). To overcome the financing issue, the voluntary market represents a significant opportunity to draw investors with unique motivations and investment perspectives to Africa. The ability of African governments and project developers to draw-in voluntary market activity could, however, be improved substantially;

A key issue that project developers in developing CDM projects in the energy sector (on-grid or off-grid) have faced is the non-availability or non appropriate national grid emission factors to comply with the respective CDM Methodology. This lead to either significant delays in the implementation of the project or withdrawal of the initiative. Ad Dankers, CDM Manager Africa (Vattenfall)[7] advised during the forum to - Develop a regional grid emission factor only taking into consideration the energy mix of the grid and not the physical location of generating units; To update it at least annually and make information easily accessible (e.g. via UNFCCC); And to be conservative to account for integrity of the CDM system.

UNEP announced that based on the current pipeline the number of CDM projects in Africa is estimated to total around 245 by the end of 2012, and with the price of carbon at just over $13 a tonne, these could be worth over $475 million. Furthermore, UNFCCC's recent decision to waive registration fee in least developing countries and in countries with less than 10 registered CDM projects will also push this forward[8].

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4 Hagbrink, Why so few carbon projects in Africa? 11/03/2010 http://blogs.worldbank.org/climatechange/why-so-few-carbon-projects-africa
5 Abbass & Turner, Africa source of growth, focus of interest for international emissions offset market, 05/03/2010, http://cdm.unfccc.int/workshops/acf/1003_acf.pdf
6 Africa Carbon Forum, Presentations, 05/03/2010, http://africacarbonforum.com/2009/english/presentations.htm
7 Dankers, Regional Grid Emission Factors, 5/03/2010, http://africacarbonforum.com/2009/docs/presentations/Day3/ad%20dankers.pdf
8 EB52, Annex 53, 12/02/2010 : http://cdm.unfccc.int/EB/052/eb52_repan53.pdf

Bonn Climate Change Talks - April 2010

Edwin Dalenoord & Geert-Jan Eenhoorn. Do - Inc

Introduction.

The first round of UN climate change talks since the meagre Copenhagen Accord concluded Sunday April 11th in Bonn with an agreement to intensify the negotiating schedule in order to achieve a strong outcome in Mexico at the end of the year. It was first time that the parties (countries) could attempt to pick up the pieces after the Copenhagen disaster.

Before going into details about the negotiations, it is important to realise that the UNFCCC (United Nations Framework Convention on Climate Change) is a convention that has been signed by practically all the countries of the world. The first Protocol that was agreed under the convention was the Kyoto Protocol, which would enter into effect the moment a majority of countries signed the protocol or it covered 55% of the global Greenhouse Gas emissions. The latter threshold was reached in 2005, when Russia finally ratified the protocol.

The protocol dictates GHG reduction targets by industrialised countries. It entered into effect in 2007 and ends 31 December 2012. Till now the world has failed to agree on a successor. This is bad for international cooperation, the global climate system, and last but not least, the future of the Clean Development Mechanism.

The Talks in Copenhagen/Nopenhagen? Image Source: UNFCCC Site

The Bonn April 2010 talks

As mentioned, the ‘Bonn talks’ were instigated to get the discussions afloat again. The discussions are taken place in two tracks. The first track is the “Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol” (with the beautiful acronym AWG-KP), the other track is the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (originally named AWG-LCA). The AWG-KP discusses the possibilities of a prolongation of the Kyoto Protocol. The AWG-LCA, the second track, discusses the agreements under the UNFCCC in a broader context.

In the Copenhagen Accord the world pledged to make available large sums of money to assist developing countries with their mitigation and adaptation actions against climate change. In the past many countries failed to deliver on their pledge. The pledge was made in the spotlights, but when the time came to pay up debts, more urgent matters dominated the political agenda; the pledge was forgotten. We can only hope this will not be the case for Copenhagen.

To make sure that the potential sources of revenue that are needed to achieve the level of climate change are realised, a High-Level Advisory Group on Climate Change Funding was established by the UN Secretary-General. This high level group will research, discuss and present a report.

The EU appears now to move away from the absolute need for a single, international agreement and to contemplate a "two track" approach, with a second commitment period under the Kyoto Protocol and a broader agreement under the UNFCCC.

The Cancun Agreement?

A commonly recognised take-away from the April 2010 talks appears to be that it is unlikely that the elements will be in place for a single or legally binding agreement to result from Cancun in December 2010. This is also confirmed by Yvo de Boer, executive secretary of the UNFCCC through July 2010. He recently noted that he thinks it is very unlikely that Cancun will bring a legally binding treaty. For now it seems the best possible outcome is an agreement on how to come to a legally binding treaty.

Mr. Ybo de Boer outgoing UNFCCC Secretary

Implications for the Clean Development Mechanism

The most successful part of the Kyoto Protocol are two of it's flexible mechanisms: Emission Trading and the Clean Development Mechanism (CDM).

The CDM allows industrialised countries to make investments in developing countries in energy efficiency or renewable energy technologies. These projects in developing countries are not based on development aid nor subsidised. They are based on a sustainable business case. Cost discipline and transparency is imposed on the CDM projects due to their need to be competitive on the global carbon market. Local government involvement is limited.

Ms. Christiana Figueres New UNFCCC Secretary

On the downside, the CDM process has become a rule-invested mechanism, hard to understand and slow moving. Despite this significant amounts of investments have been channelled via the CDM. Because of the unclarity of the near future of the carbon mechanisms, investment risk has greatly increased, slowing down industry's involvement & commitment. The CDM can only function if certainty is given to investors. This can be realised by long-term emission targets. Copenhagen failed to provide certainty since it didn't reach an effective agreement.

Hopefully the negotiators get the process back on track at their next meeting in June of this year, however expectations on success are very moderate.

Sources:

- http://www.nortonrose.com/keystrengths/energyinfrastructure/insightintoclimatechange/pub27793.aspx?lang=en-gb&page=all
- http://www.bloomberg.com/apps/news?sid=adKxVe1DKNpo&pid=20601087
- http://unfccc.int/resource/docs/2010/awglca9/eng/03.pdf
- www.un.org/wcm/content/site/climatechange/pages/financeadvisorygroup.

Nuclear debate overview

Arno van den Bos. Ecofys

On Wednesday 21st of April, YES-DC brought us another informative evening with two heavyweights of the nuclear debate, namely Andre Wakker from the Nuclear Research and Consultancy Group (NRG) and Peer de Rijk, president of WISE, the worldwide network of anti nuclear energy campaigners. The ring was managed by referee Peter Scheffer, who did a good job in keeping the discussion dynamic, and involving an active, witty, and numerous audience with over 40 people attending the debate. Both defenders were first given a chance to give their main views, and then the debate was held around particular points of interest. A few notable points were made:

- Both debaters agreed on the need to move away from fossil fuels.
- Andre has worked for 3 years in the field of renewable energy policy, and lost faith to a large extent in the capacity of renewables to grow sufficiently in the near future.
- The nuclear industry is capable of standing on its own feet (Andre). Specific costs of nuclear have increased over the past decades due to increased safety requirements, whereas costs for renewables are coming down fast (Peer).
- Uranium resources are expected to be sufficient for the foreseeable future, even with current technology (see Redbook below), but mining still has sustainability issues (contamination, working conditions) and has to be imported from outside Europe, albeit from more stable and “friendly”countries than those that harbour fossil fuels.
- Worldwide there is a true “nuclear renaissance”, with 52 nuclear plants currently being planned (Andre). Whether these plans will be realized is unsure (Peer)
- It is not very useful to hold this debate nationally, when heaps of cheap nuclear power are imported every year from other countries (in particular France, where more than 80% of electric power production is Nuclear)

Both debaters agreed that nuclear waste will always remain a problem but if strong institutional systems are in place (IAEA), the risk is manageable (Andre) It is impossible to guarantee the stability of these systems over the lifetime of radioactive waste (over 100 000 years) (Peer).

Pictures of the YES – DC Nuclear debate

At the end of the evening the number of hands "against" seemed to have grown slightly, but no knock-outs were delivered, and as with most important elections, a recount may be necessary… The debate went on afterwards at regular bar/restaurant Walden on the Domplein, where further ideas and networks where extended under enjoyment of cold beer.

Useful references: Uranium: Resources, Production and Demand (The RedBook) from the International Atomic Energy Agency (IAEA)

Brief news

DEO DAY
On Saturday 29 May 2010 the bi-annual YES-DC Debate on Energy and Development will be held in Utrecht. The general topic of the day is: How can modern energy for developing countries be financed? The aim of the DEO day is to share visions and explore innovative approaches of financing and promoting the implementation of modern energy systems in developing countries. This debate is made possible with financial aid from NCDO and Hivos.

The DEO day will be a carbon neutral activity. The event will take place at the Catharijneconvent in Utrecht. Admission costs: 10€, students price is 7,50€, including lunch. Please note that there is a limited number of seats available, therefore registration is essential through DEO2010@yes-dc.org. More information on YES-DC, and a DEO-day schedule can be found at www.yes-dc.org.

Excursion to off-shore wind park
Friday the 11th of June we will board the MS Marion at 11.00 for a 3-4 hour boat trip to one of the Dutch offshore wind parks. Prior to boarding we will meet for coffee and an introduction video to the park in a café near the harbor at 10.00. On board we will invite two experts who will go into the technical details as well as discuss the ecological consequences of a wind park at sea.

Where: IJmuiden (details of meeting place will follow)
When: Friday, June 11th, 10.00 - 16.00
Costs 25 euro p.p. (YES-DC-members)

We have limited seats available on the boat. In case you want to join we urge you to reply swiftly. Seats are assigned on a first come first serve basis. When interested please send an email to marcpdewit@gmail.com

YOUNGOs seek for greater involvement in the UNFCCC process:
After the serious limitations in the participation of civil society organizations during the COP 15 in Copenhagen and the subsequent negotiations rounds, the Young Movement (YOUNGO) has been discussing with the UNFCCC Secretariat on ways to secure its participation in the climate decision-making process. Besides access to conferences venues, YOUNGOs are looking to be recognized as an official UNFCCC constituency group, a level that will enhance participation in plenary sessions, officials talks with chairs of the Ad-Hoc Working Groups, Convention Bodies and heads of delegations. In addition the YOUNGOs are seeking to get financial support to facilitate the participation of YOUNGO coming from developing countries. YES-DC is also involved in this discussion.

YES-DC will continue informing you about this and other developments towards the Mexico Conference in the next editions of the newsletter and the YFFN.

Topic for our next newsletter:
Energy Technologies for the Future. Your articles and input are really welcome at secretariaat.yesdc@gmail.com before August 31st 2010.