

KEY  
INSIGHTS

—  
2015

GO GREEN,  
NOW?



AARHUS SYMPOSIUM  
BATTLE OF THE ECONOMISTS

LEADERS OF TODAY CONNECTING WITH LEADERS OF TOMORROW



## WHY SHOULD I GO?

To experience three top economists debate on how to optimally address the Danish ambitions of sustainability from an economic perspective.

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## WHERE SHOULD I GO?

The S-building, Fuglesangs Allé 4, Aarhus University.

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## WHEN SHOULD I BE THERE?

Date: November 2, 2015.

Time: 15.30 to 20.00.

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## HOW DO I SIGN UP?

Please be aware that seats are limited. In order to participate in Battle of the Economists 2015, you need to secure yourself a seat through Aarhus Symposium Challenge or the official Aarhus Symposium sign-up on our website: [www.aarhus-symposium.org](http://www.aarhus-symposium.org).



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## THE STORY OF BATTLE OF THE ECONOMISTS

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Every year, the week of Aarhus Symposium is kicked off by Battle of the Economists. Originally launched as a warm-up event for Aarhus Symposium, Battle of the Economists is now an independent event attracting more than 400 people every year.

# BATTLE OF THE ECONOMISTS 2015 GO GREEN, NOW?

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What are the most urgent challenges that Denmark faces when it comes to this year's overall theme, Leadership and Technology? And, perhaps more importantly, how do we handle these challenges in the best way?

Prior to Aarhus Symposium 2015, we once again invite you to Battle of the Economists. Three top economists have been invited to share their thoughts on whether Denmark should go green now? Each of the speakers will give a short presentation followed by a debate between the economists and the audience, moderated by the experienced journalist, **Thomas Bernt Henriksen**, Economics Editor at Dagbladet Børsen A/S.

## SHOULD DENMARK GO GREEN, NOW?

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In the last few years, Denmark has set out to become one of the greenest countries in the world. Successive Danish governments have focused on supporting sustainable technologies through green policies, causing a Danish green technology hub to emerge. Today, Denmark is considered to be in a leading position in terms of offering sustainable solutions.

According to Dansk Energi, more than 50 percent of the power used in Denmark in 2014 came from renewable sources, and is expected to rise in the near future. Furthermore, new innovative technologies provide the opportunity to reduce energy consumption significantly through the right investments.

However, as innovation continues, newer and more economically efficient technologies will emerge in the future. This leads to the question of whether it would be more profitable to postpone the investments, and thus, uncertainty in the green transition will follow.

In order for Denmark to become a sustainable society, how should Denmark respond to such uncertainty? This depends on whether Denmark should embrace this technological evolution today and further support the development of sustainable solutions, or await the development before taking action. Either way, can Denmark maintain and capitalise on its leading position within green solutions? And should Denmark go green now?

We highly encourage all participants to take part in the debate and to consider these challenges from their own perspective. What do you believe is the optimal approach to solving this challenge within Leadership and Technology?

We look forward to welcome **Ditlev Engel**, Chairman of the Board at Big Future 2025, **Thomas Dalsgaard**, Executive Vice President at DONG Energy, and **Michael Svarer**, Professor of Economics at Aarhus University.

# AGENDA

|               |                                     |
|---------------|-------------------------------------|
| 15.30 - 16.30 | ARRIVAL - MEET DONG ENERGY          |
| 16.30 - 16.45 | WELCOME TO BATTLE OF THE ECONOMISTS |
| 16.45 - 17.00 | PRESENTATION BY DITLEV ENGEL        |
| 17.00 - 17.15 | PRESENTATION BY THOMAS DALSGAARD    |
| 17.15 - 17.30 | PRESENTATION BY MICHAEL SVARER      |
| 17.30 - 18.00 | BREAK WITH SNACKS AND DRINKS        |
| 18.00 - 19.00 | DEBATE                              |
| 19.00 - 20.00 | A BITE TO EAT AND NETWORKING        |

WE LOOK FORWARD TO SEEING YOU ON NOVEMBER 2, 2015.

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## THOMAS BERNT HENRIKSEN

ECONOMICS EDITOR, DAGBLADET BØRSEN A/S



We look forward to welcoming back Thomas Bernt Henriksen as the moderator of Battle of the Economists 2015. He is the Economics Editor at Dagbladet Børsen, and here, the emphasis of his work lies in linking new research to the current economic and political agenda. He thereby combines his education in economics and research experience with his interest in the communication of complex issues.

Since 2008, Thomas Bernt Henriksen has been the Council Director for The European Council of Economists. He joined Børsen in 2002 from a position as First Vice President in Danske Markets at Danske Bank. He holds a Master's degree in Economics from the University of Copenhagen.

With his background as an economist and his journalistic experience, Thomas Bernt Henriksen will make sure that we are guided through the presentations and the debate in an interesting and enlightening way.

# SPEAKER AT BATTLE OF THE ECONOMISTS 2015

# DITLEV ENGEL

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**Ditlev Engel** is the non-executive Chairman of SE Blue Renewables, Denmark's largest onshore wind owner and operator, Chairman of Denmark's Green Investment Fund, as well as Chairman of Big Future 2025, an independent initiative to help Danish businesses develop sustainable growth. Ditlev Engel was Chairman of the green working group at three consecutive G20 summits in South Korea, France, and Mexico from 2010 to 2012.

Engel was Group President and CEO of Vestas Wind Systems from 2005 to 2013. Prior to joining Vestas, Engel served as the Group President and CEO of Hempel Denmark from 2000 to 2005. Before his tenure as CEO, he worked 12 years abroad for Hempel.

Ditlev Engel has a Diploma in Business Economics from Copenhagen Business School.

# INTERVIEW WITH DITLEV ENGEL

## CHAIRMAN OF THE BOARD, BIG FUTURE 2025

As organisers of Battle of the Economists 2015, we invited Ditlev Engel to give his take on the question: Is it time for Denmark to go green now? In a pleasant interview, Ditlev Engel discussed the meaning of the term “going green”, and why he thinks Danish companies must embrace the sustainability trend to survive in the future.

When asked if it was time for Denmark to go green now, Ditlev Engel answered without hesitation. His answer was clear and concise: “For me the definition of green and sustainability is very simple: It is that you constantly have to create more with less”. He continues: “When you look ahead now, this (going green, red.) has nothing to do with a theme or something you could or could not do. This is going to be a prerequisite for any company in order to stay in business on a long term”.

In the interview, Ditlev Engel focuses heavily on small and medium-sized companies, as those companies employ almost 50% of the Danish workforce in the private sector. Furthermore, he argues that the economic consequences of a green transition are different when comparing bigger companies to their smaller counterparts: “Larger enterprises have more resources compared to smaller companies, making the challenge of following a sustainable agenda much more difficult for small businesses”. For Ditlev Engel, the key question is how we

ensure that the small and medium-sized businesses will include the transition to their business strategies. In his words, companies need to make the sustainable transition a part of their “DNA”, underlining the importance of the focus.

### NEXT STEP FOR SMALLER COMPANIES

According to Ditlev Engel, there are two steps that small and medium-sized companies need to follow in order for them to create real value in their businesses going forward: “The first thing is that you have to make sure that you have a growth agenda. Secondly, that growth agenda has to be rooted in sustainability”.

His answers to our previous questions made us wonder which role the government has played and continues to play. When asked directly whether he thinks it has done enough to ensure the transition, he notes that the Danish government has made a sufficient effort in this transition and states he believes that it is now up to the businesses to take action themselves, e.g. by utilising from so-called “development forums” where leaders gather and discuss the matter.

With this in mind, Ditlev Engel was asked about the government’s 2050 goal of being the first fossil fuel free society. In addition to this, we asked why Denmark has a more ambitious goal than the rest of EU, when this indeed is a global challenge.

Ditlev Engel agreed that it is a global challenge, which Denmark cannot solve alone: “Through an ambitious goal, Denmark can create an image as a strong contributor to sustainable solutions. However, the global nature of climate change means that nations should unite forces and share the responsibility. In December 2015, Paris will host the COP 21, during which an agreement on each country’s contribution – hopefully – will be reached”.



**“When you look ahead now, this has nothing to do with a theme or something you could or could not do. This is going to be a prerequisite for any company in order to stay in business on a long term”**

He notes that the COP21 should be a major focus point for the Danish companies, because of the opportunities for Danish companies to tap into this agenda. Ditlev Engel believes a large part of the Danish companies within green sectors have much to offer in order to create more with less. As Ditlev Engel puts it: “The reason Danish companies have much to offer is found in the “Danish DNA”, which is linked to a good understanding of resources. It is only in Denmark where I have seen people spending their Sunday on sorting garbage in different boxes”.

Denmark is a very small nation, yet a nation that is disciplined in its use of resources – an approach that could prove advantageous in the long run.

### ADVICE FOR COMPANIES GOING FORWARD

“In the “Big Future”-study we made, we asked the scientists to name the single most important challenge for the small and medium-sized companies to get their hands around”. He explained that their recommendation was for companies to get a very firm grip on their CO2 emissions and understand their impact as business on CO2 emissions. Based on this, one of the recommendations from the “Big Future” report was that businesses need to know their CO2 emissions as well as they know their cash flows. The reason is that Big Future is seeing a trend, where the supplier must be able to demonstrate what its impact on society is. Ditlev notes: “If the supplier cannot do this, it could prevent you from doing business going forward. In other words, it could become your license to operate, and not just something we call ‘green’”.

The conclusion from Ditlev Engel is clear. Denmark has to get the small and medium-sized companies on board the sustainable agenda. Furthermore, they have to understand their CO2 emissions as well as their own cash flows if they wish to be a part of the future.

On November 2, we look forward to welcoming Ditlev Engel to elaborate further on the previously mentioned topics.

# SPEAKER AT BATTLE OF THE ECONOMISTS 2015

# THOMAS DALSGAARD

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**Thomas Dalsgaard** is the Executive Vice President of DONG Energy. With energy sources ranging from oil and gas to offshore windmills, DONG Energy is the leading energy supplier in Denmark, making them one of the most important drivers of the Danish transition to a sustainable society.

Through his role in the management of DONG Energy, Thomas Dalsgaard has considerable insights into the challenges and opportunities of the Danish transition to sustainability. He is leading DONG Energy's department of Thermal Power and has been involved intensively in the innovative New Bio Solutions business, which aims to convert waste to energy. Previously, Thomas Dalsgaard has held positions as a Senior Economist in the OECD and IMF, and as the Head of Division at the Danish Ministry of Finance.

Thomas Dalsgaard obtained his Master's degree in Economics from Aarhus University.

# INTERVIEW WITH THOMAS DALSGAARD

## EXECUTIVE VICE PRESIDENT, DONG ENERGY

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To prepare the participants for Battle of the Economists 2015, Thomas Dalsgaard gave us an appetizer to his perspective on this year's theme: Should Denmark go green now? Thomas believes that Denmark is on the right track. He elaborates: "Our strategy is to embrace the green transition, which is backed by a broad political consensus. Stopping the overall course now would be to undermine investor confidence". He continues by arguing that most of the world is moving towards a sustainable future, both to protect the climate and to become independent of imported fossil fuels.



**"Now, the major barrier is the development of infrastructure has to catch up with the development of wind power"**

We asked Thomas which technologies Denmark should invest in to ensure a leading position in the green transition. He says: "Denmark already has a clear advantage in combining heat and power, as well as both on- and offshore wind power". He supports the idea of continued investments in these technologies, but argues that the Danish power suppliers are constrained by the lack of a truly European power grid. He continues: "Now, the major barrier is

the development of infrastructure has to catch up with the development of wind power. We need new transmission interconnectors to the Netherlands and the UK, and the barriers to export power to Germany must be removed, too".

### THERE IS POTENTIAL FOR EXPORTING ENERGY

Thomas states that Denmark is leading in different areas, in particular within offshore wind and bioenergy. He continues: "We, in DONG Energy, are converting our combined heat and power plants to biomass and extend the lifetime of the Danish power plants at the same time. Many of the small decentralised combined heat and power plants are also at a stage where they will need new investments. It is critical that investments are backed up with stable frameworks, such that the market has the incentives to invest in the right things".

With all this in mind, we asked Thomas if there are any costs of this green transition. He argues that the costs for the Danish economy of the current pace are manageable. By and large, the Danish industry is not particularly sensitive to the price of energy. An important note is that the current payment for renewable subsidies through the PSO is tightly linked to the price of electricity, which is historically low. This is partly due to the influx of new subsidised renewables in Germany, Denmark, and the other Nordic countries.



## BATTLE OF THE ECONOMISTS 2014

However, the answer is also closely related to the fact that there is overcapacity due to the economic recession and falling electricity demand. Electricity prices are likely to start increasing when the market adjusts and the economic recovery starts to kick in.

### WHAT ARE THE ECONOMIC INCENTIVES TO BE A FRONT-RUNNER?

Thomas argues that being a front-runner in the climate change battle is first of all a political question. The decision to be a front-runner is not made in a perfect world. Therefore, the challenge is that the globe does not come together in harmony by deciding to internalise the external effects through a carbon tax. In our battle against the dependence of imported oil during the oil crises in the 1970s, Denmark started a process that resulted in energy technology advantages – combined heat and power, wind power, and energy efficiency. However, our success as an exporter of energy technology and solutions depends on the transition in the

rest of the world. Therefore, it does not make sense that Denmark commits to the green transition alone. We can benefit industrially from being at the forefront, but only if there is a demand for the knowledge in the rest of the world.

We asked Thomas Dalsgaard to point out one policy he would change to accelerate the green transition. He pointed straight to the European Emission Trading System. He argues that if the system would work better and secure a proper price on CO<sub>2</sub>, a number of national subsidy schemes in Europe could be rolled back.

The conclusion from Thomas Dalsgaard is clear. Denmark has a large potential to export both energy and energy technologies, but we need a truly European power market based on interconnectors and a European Emission Trading System which works properly. On November 2, we look forward to welcoming Thomas Dalsgaard to elaborate further on the transition of the Danish society.

# SPEAKER AT BATTLE OF THE ECONOMISTS 2015

# MICHAEL SVARER

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**Michael Svarer** is a professor at the Department of Economics and Business Economics at Aarhus University. His primary research areas and teaching interests are labour economics, applied microeconometrics, and microeconomics in general. He is affiliated to numerous international research institutions, and he is a former member of the Labour Market Commission.

Michael Svarer has been intensively involved in policy advising in Denmark, and among other positions, he is a member of the board of the Danish Economic Council and the Danish Environmental Economic Council.

Michael Svarer has a Master's degree and a PhD in Economics from Aarhus University.

# INTERVIEW WITH MICHAEL SVARER

PROFESSOR OF ECONOMICS, AARHUS UNIVERSITY

Earlier this year, we sat down with Michael Svarer to talk about this year's theme, and whether it is time for Denmark to go green now. During the interview, Michael Svarer explained that he thought the Danish green transition should accelerate. However, he noted that policymakers should only focus on reducing negative externalities, while companies should narrow their focus on doing business, and hereby drive the green transition.

"It is time to accelerate". With this unambiguous statement, Michael Svarer articulated his answer on whether Denmark should go green now. He further elaborated on his concise answer, stating that not only should Denmark go green, but as should the whole world. Moreover, he argued that environmental problems are global, and if Denmark were to do something that was not supported by other countries, then it would have absolutely no effect on the environment. Hence, from an economist's perspective, a global solution would be the only economically sensible approach to dealing with the environmental challenges.

In the interview, Michael Svarer argues that a policy needs to be global to have an effect on the environment. If this is the case, why does Denmark have more ambitious climate goals than the EU? He elaborates: "It makes sense if it is targeted towards sectors that are not influenced by EU policies. In Denmark, we have a

quota sector, and a non-quota sector, such as transportation, farmers, etc. The CO2 quota sector is regulated in the EU quota market". Furthermore, Michael Svarer believes that the quota-regulated market is a well-functioning market that should be extended to cover the non-quota market as well - and the market should not be intervened with in any other way.



**"It is time to accelerate"**

He continues: "I think that policies on top of the quota sector are imposing unnecessary costs for the Danish society, for Danish consumers, and Danish businesses without reaching the goal of improving the environment". Therefore, Michael Svarer's message to us is that if the government wants to do something on its own, it should target the non-quota sectors or include them in the quota system.

## WHAT THE GOVERNMENT SHOULD DO

Despite his vocal support of the emissions trading system, Michael Svarer expresses his concern regarding the scheme: "The loophole of the quota system is that if we do not use our quotas, other companies can buy them, and use them".

This trading system will cancel out the expected pollution decrease and instead a potential market disparity will be created. His solution, however, is simple: “What the government should do – if they are serious about climate change – is to buy the quotas themselves and use them for nothing”.



**“Are the politicians best to decide which sector should have the money? As an economist, I will say no”**

We asked Michael Svarer whether the government should, in fact, secure a green transition: “No, the backbone argument from the economists is that if there is a potential for doing business then the businesses should do it, and the politicians should keep to the market failures and the externalities. The policy makers should focus on reducing these externalities, such as pollution. And the companies should focus on running their business”.

Michael Svarer argued that it is very hard to find good economic arguments to support a specific sector; it is a “pick the winner strategy” as he puts it. If the government allocates money to a specific sector, it will grow. He notes: “Are the politicians best to decide which sector should have the money? As an economist, I will say no. The market should regulate itself, and the government should target

the pollution”.

## ECONOMIC CONSEQUENCES OF A GREEN TRANSITION

As studies show, a green transition can have economic consequences for the companies, which is why we asked Michael Svarer to explain these consequences. As with many economic problems, it constitutes a trade-off, he noted, before continuing: “Of course there is a cost of going green in the short run. It means that sometimes you cannot use the cheapest fuel or the cheapest technology”. However, he argues that using the cheapest resources now will lead to fewer production possibilities in the future. He continues: “At our assessment, at the Danish Economic Council, the cost of a green transition compared to the growth rate is not that big”. The calculations, which can be found in the latest report from the Danish Economic Council, explain that by the year 2100 Denmark’s GDP will have increased by 400%. This increase would only be 1-2% lower if EU-regulated environmental policies were imposed.

There is no doubt that Michael Svarer is a strong advocate for a green transition, and he even proposes an acceleration of the process. Concurrently, he concludes that the government should let the firms mind their own business and focus on the negative externalities, such as pollution.

With this in mind, we look forward to welcoming Michael Svarer as a speaker at Battle of the Economists 2015, November 2, to elaborate further on this interesting topic.



**DONG**  
energy

## DONG ENERGY

BATTLE OF THE ECONOMISTS 2015 PARTNER

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DONG Energy is one of the leading energy groups in Northern Europe, headquartered in Denmark. Around 6,500 ambitious employees are engaged in exploring and producing oil and gas; developing, constructing and operating offshore wind farms; generating electricity and heat from our power stations and offshore wind farms; and providing energy to residential and business customers on a daily basis. Group revenue was DKK 67bn (EUR 9.0bn) in 2014.

For further information see  
[www.dongenergy.com](http://www.dongenergy.com).



## MAERSK LINE

BATTLE OF THE ECONOMISTS 2015 PARTNER

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Maersk Line is committed to providing fast track careers for bright young professionals across the globe. Our Maersk Liner Graduate Programme (MLGP) combines learning and talent practices to maximise developmental opportunities for all.

MLGP is a two-year programme that consists of two job rotations where you will acquire the best possible functional knowledge and business insights; supplemented by MLGP Educational and Developmental Support.

Join us at Battle of the Economists 2015 to learn more, and accelerate your career with us.



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