

When Oil and Wind Turbine Companies Make Green Sense Together

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ABSTRACT

In this article I contribute to descriptive green business research on how processes of eco-effective greening business unfold in the practical reality. I look into the case of the increasing interaction between the multinational oil company Shell and the world's largest wind turbine company Vestas. I draw on descriptive organisational sense-making theory and analyse to this end Shell and Vestas' shared green sense-making on off-shore wind energy business. The article concludes that greening companies such as Shell – that are not born green – might be considerably advanced, if these companies strengthen their relationships with companies such as Vestas – that are born green. This is so, since companies that are born green have strong green ecocentric business beliefs that can function as important engines in shared green sense-making with companies that are not born green and have more hesitant green beliefs.

KEY WORDS: Sustainable business, sense-making, climate change, oil and wind turbine companies

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INTRODUCTION

The two dominant green business research streams - anthropocentric environmental management and ecocentric deep ecology - disagree on, whether man should be viewed as over *or* under nature (Thomas, 1999). Anthropocentric environmental management (e.g. Porter and van der Linde, 1995a, 1995b; Walley and Whitehead, 1994; Hanna, 1995), also called reform environmentalism, views man as over nature and envisages that greening of business cannot be moved beyond the level of eco-efficiency. Ecocentric deep ecology (e.g. Shrivastava, 1995a, 1995b; Gladwin, Kennelly and Krause, 1995; Purser, Park and Montuori, 1995; Whiteman and Cooper, 2000) views nature as over man and envisages, as opposed to reform environmentalism, ‘a radical reordering of industrial society through the promotion of ecocentric values (Newton, 2002).’

In this article I use a case study methodology in constructing new descriptive theory on how companies are able *in practice* to advance their green sense-making processes (Weick, 1979, 1995, 2001; Sharma, 2000) to a level that is beyond the eco-efficiency level advocated by reform environmentalism. The case that is analysed concerns specifically how the multinational oil company Shell is becoming more eco-effective (Dyllick and Hockerts, 2002) through developing their off-shore wind business expectations in a growing interaction with Vestas - the world’s largest wind turbine company. The research question to be addressed is:

How are the multinational oil company Shell developing their wind business expectations and what does this development imply for the conceptual understanding of green belief sense-making processes capable of leading to increased eco-effectiveness?

In investigating this question the article concludes that strong green ecocentric business beliefs held by companies such as Vestas, that are born green, can function as 'important engines (Weick, 2001:27)' in a shared green sense-making with companies such as Shell, that are not born green, and have more hesitant green beliefs. The managerial implications (Welford, 1998) of such a conclusion seems to be that if companies, that are not born green, are in practice to live up to suggestions beyond those advocated by reform environmentalism, one way for them to do that is to build relationships with companies that have emerged out of ecocentric societal sub-cultures and that has proven to be capable of making business on such contemporary business values.

ORGANISATIONAL SENSE-MAKING THEORY

In this article I analyse how the multinational oil company Shell and the world's largest wind turbine company Vestas these years are developing a shared green belief-driven sense making unfolding as 'an orderly interaction around expecting (Weick, 1995:134)'. The interaction unfolds specifically around Shell and Vestas' off-shore wind business expectations. Vestas is both a supplier for Shell International Renewables - which is a green business unit established in Shell in 1997 - and is also a competitor for Shell oil and gas. Out of this complex business relationship emerges currently, as described below, some shared off-shore wind business expectations that potentially can turn the North Sea into a major green energy producing area beyond the oil era.

Weick (1995) focuses on two key levels in organisational sense-making: Intersubjectivity, which is the micro level in organisational sense-making, where two or more actors have a conversation that generates some sort of shared interpretations. The macro level in organisational sense-making is called generic subjectivity, which can be equated with the organisational culture and the social structure of the organisation (Weick, 2001). In organisational sense-making there is a movement back and forth between the micro level of intersubjectivity and

the macro level of generic subjectivity by means of continuous communication. In this process actors (micro level) are constructing structures (macro level) and vice versa. Weick (1979) early on in organisational theory called this process organizing, while Giddens (1984) in social theory called it structuration. The tension between the innovation of intersubjectivity and the control of generic subjectivity animates the organizing.

In this article I take an interest in the movement back and forth between Shell's controlling generic subjectivity (culture and social structure) and the innovative intersubjectivity produced in Shell's intensified interaction with Vestas. In such a movement back and forth a sensible new event 'is one that resembles something that has happened before (Weick, 1995:170).' Thus, as will be described below, in Vestas and Shell's shared sense-making Shell is trying to make sense of their new emerging wind energy business through 'something that has happened before' in their oil business.

METHOD

As a first step towards determining the overall research question in this article a semi-structured qualitative interview (Kvale, 1997) was carried out with the Director for the Danish Wind Industry Association. The theme for the interview was the dynamics between oil and wind turbine companies. The original assumption behind formulating this theme for the interview was that oil companies might be viewed by the wind turbine companies as delaying a global renewable energy business development. The interview developed in a way, where this assumption was not supported, in particular, as regards Shell. Thus, the interview paved the way for formulating an overall research question that could facilitate an analysis of the growing positive dynamics between Shell and the largest Danish wind turbine company Vestas. The Danish wind turbine companies are market leaders in on-shore and off-shore wind energy.

To analyse the intensified interaction between Shell and Vestas a video recording of the Copenhagen Off-Shore Wind Conference is used. This conference was held 26-28 October 2005 in Denmark. It was arranged by the Danish Wind Industry Association and sponsored by Vestas, Shell and other parties involved in the wind business. The conference was quite unique, because it is the first major joint conference about future off-shore wind business expectations that the oil industry and the wind turbine industry have arranged together. In that sense this conference provides important data for the green belief-driven sense-making process analysed in this article. The speeches by Shell, Vestas and the other involved parties have been transcribed and used as qualitative data in the analysis.

In addition to these contemporary data the article also draws on historical written data on Shell's green sense-making over time on their renewable energy business activities. These data covers a little more than a decade from 1990 and until present times. The sources for the data are: ShellWorld (SW), Shell's internal magazine for its staff, and Shell's Annual Reports (AR). In addition, I also draw on newspaper articles about Shell from The Financial Times (FT) from this same period. Analysing qualitative data from the interview and the speeches at the conference supplemented with the contemporary written historical qualitative mediated data (Czarniawska, 1997, Witte, 1972; Snyder and Paige, 1958) will make it possible to capture key areas of intersubjectivity and generic subjectivity in the joint sense-making process under scrutiny.

ANALYSING SHELL AND VESTAS'

SHARED SENSE-MAKING ON OFF-SHORE WIND ENERGY

A key occasion for starting a belief-driven sense-making process is uncertainty in extrapolation of expectations (Weick, 1995). To this end a major uncertainty for Shell is related to the increasing depletion of finite oil and gas reserves and the growing concern over climate change. In facing this

uncertainty Shell and other oil companies have difficulties in making extrapolations of their business expectations for the coming decades, where oil and gas wells start to dry out and climate change might worsen. Below it will be illustrated how this uncertainty has been reduced by Shell and Vestas' green belief-driven sense-making activities resulting in the companies' emerging shared off-shore wind business expectations.

Shell's Anthropocentric Oil-related Generic Subjectivity

Renewable energy technologies appear to challenge key values, norms and competencies in Shell and other oil companies' oil-related generic subjectivity. This is so, because renewable energies are *small scale technologies designed for a decentralised energy system*. To this end the original green ecocentric vision behind these technologies was from the beginning that each home should have their own little wind turbine or solar panel, which would then ideally make the consumers independent of large energy suppliers such as utilities and oil companies. Oil and gas production on the other hand fits into the traditional anthropocentric vision of a centralised energy system, where each home are dependent on large energy companies that operate large scale technologies.

That renewable energy is not compatible with the oil companies' existing generic subjectivity is probably one of the reasons why, many oil companies in the 1990ties have preferred to sustain the oil and gas age (Ketola, in press) instead of concentrating on seriously expanding their renewable energy business. However, wind energy has in recent years, in fact, gone through a technological development away from the original green ecocentric decentralised vision of small scale wind turbines for private homes. Instead, wind energy turbines have become larger and are often installed in wind energy parks – a development, which has made wind energy more in line with the anthropocentric centralised vision behind the existing energy system.

The above development in wind energy is noted already in Shell's annual report from 1998, where Shell International Renewables reports that Shell should seek to 'gain a competitive advantage in wind energy from Group skills in the design, implementing and operation of complex engineering projects (AR,1998:21).' In other words, Shell International Renewables makes sure that it increasingly becomes clear to Shell oil and gas that Shell's existing anthropocentric values, norms and knowledge about complex engineering projects can be utilised in the development of Shell's future wind business activities. Later on this favourable development - from the perspective of Shell's oil related generic subjectivity - is even further strengthened, because the wind energy power plants go off-shore. Large wind turbine parks on-shore have started to meet resistance in the neighbourhoods where they are installed. Going off-shore solves this emerging problem and makes it possible to make the turbines even bigger. Also, the wind conditions at sea are better than on-shore and the off-shore turbines therefore produce more energy. This off-shore development seems to have had a major positive effect on Shell's interpretations of wind energy. ShellWorld reports in 2000: 'Shell believes that offshore wind has a real potential...The skills we have built up in the North Sea oil and gas industry will be a major asset in helping us to develop this over the next five to ten years....The total available wind resource in the world today that is believed to be technically recoverable is 53,000 terawatt hours a year. And that's four times as much electricity as the entire world consumed in 1999 (SW,Dec,2000:27).' Installing and running large scale off-shore wind turbine parks are somewhat similar to installing and running large scale off-shore oil and gas installations. This similarity makes it possible for Shell oil and gas to make sense of wind energy business through 'something that has happened before (Weick, 1995:170)' and for Shell International Renewables internally to develop 'socially acceptable justifications (Weick, 2001:26)' for Shell's new renewable energy business. Shell oil and gas staff probably fear unemployment in Shell's current transition towards renewable energies and if oil and gas staff are to let go of their

resistance, they must feel confident that they will be able to keep their job in the new green Shell. This seems to be possible in developing, in particular, Shell's off-shore wind business. In other words, being aware of the social dimension (Dyllick and Hockerts, 2002) in Shell's green transition, Shell International Renewables has by now paved the way for Shell to be able to pursue a deeper and more solution oriented (Sharma, 2000) belief-driven sense-making on renewable energy business.

Vestas' Ecocentric Generic Subjectivity

Vestas and other wind turbine companies with an ecocentric generic subjectivity have in parallel with the above described developments in Shell developed a more open attitude and positive interpretation of oil companies and utilities. These big anthropocentric energy companies are by now viewed as an opportunity and not any longer viewed as a threat (Sharma, 2000) to the smaller ecocentric wind turbine companies. The Director for the Danish Wind Industry Association explained: 'The oil companies appear to be real busy broadening their investments - to green themselves, of course - but also to include renewable energies in their business for them to have some convincing solutions to, for example, the Chinese government when China now has decided that 10 % of the energy consumption in China should come from renewable energy sources... Today the big energy companies they compete with each other to be able to offer the right solutions and the right energy mix... The competition is between the oil companies and the utilities - we are just suppliers - and we are happy the more competition and the more investments, because the larger the market for renewable energies becomes - and that's good for us.' The Director furthermore emphasised that 'it makes a difference' that oil companies and utilities are becoming increasingly involved in wind energy developments these years 'because that signals to everybody that wind energy has become mainstream - and of course also more and more a global industry, which maybe

not tomorrow, but in a few years can make a stand against the world's largest companies – that is our goal.' As it appears in the quote, oil companies and the utilities play an important role not least for the wind turbine industry's ambitions of becoming a major *global* industry.

The Director for the Danish Wind Industry Association noted that the very first green activists that started Vestas and the other Danish wind turbine companies in the 1970ties 'would turn around in their graves' if they saw the corporate development in the wind energy industry away from the ecocentric vision of a decentralised green energy system. The ecocentric position is namely not just about environment. The ecocentric position is also about business models emphasising non-hierarchical structures, participatory decision-making and decentralised authority. These characteristics are favoured as opposed to more traditional business models characterised by hierarchical structure, top-down decision-making and centralised authority (Shrivastava, 1995a). The latter business models are typically the ones that dominate large multinational oil companies such as Shell. However, Vestas is also at this point in time - being the largest wind turbine company in the world - a very large international company. Vestas is, therefore, itself not any longer a small decentralised non-hierarchical company. Thus, Vestas has still at this point in time an ecocentric product, but has - because of growth and internationalisation - not sustained a pure ecocentric business model. Furthermore, the Director for the Danish Wind Industry Association emphasised that to the business managers, who run the wind turbine companies today, the large energy companies are considered to be increasingly close and important business partners. Thus, the above described developments in the wind turbine companies puts these companies in a position, where also they can pursue a more open minded (Sharma, 2000) shared sense-making effort together with the large utilities and oil companies.

Shell and Vestas' Wind Business Expectations – a Self-fulfilling Prophecy

When organisations such as Shell and Vestas in belief-driven sense-making processes talk with one another (intersubjectivity phase) and dwell on what might happen their 'expectations becomes better articulated, stronger, and potentially more capable of being a potent force in their own validation (Weick, 1995:134).' In other words, in belief-driven sense-making unfolding as 'an orderly interaction around expecting (p. 134)' the emerging expectations – in this case Shell's and Vestas' shared off-shore wind business expectations - tend to become self-fulfilling prophecies.

Below I will draw on a particular example of self-fulfilling belief-driven sense-making, referred to by Weick (1995). In a test a teacher was told on beforehand that a random selection of students in a class were the best students. The test showed that the teacher's expectations influenced his attention and teaching efforts in a way, where his expectations ended up over time as a self-fulfilling prophecy – the randomly selected students, in fact, through his teaching became the best students in the class. In analysing Shell's and Vestas' belief-driven sense-making process it should, as the first step, be noted that Shell - as a major multinational oil company with a considerable financial strength and a global reach – is the dominant part. Meanwhile, as the world's largest wind turbine company and leading company on off-shore wind turbines, Vestas has been able to gain Shell's respect and attention, both in their role as supplier for Shell International Renewables and as competitor for Shell oil and gas. Thus, Shell expects Vestas to be the best company in the wind energy industry.

Shell's teaching efforts is - as illustrated at the Copenhagen Off-shore wind conference held in Denmark 26-28 October 2005 – focusing on the *quality aspects* in off-shore wind business activities. The title of Shell WindEnergy's General Manager for Global Operations key note speech at the conference was to this end 'Exploring synergies between wind and off-shore oil and gas'. The Shell speaker started his speech by saying that he had worked for many years in

Shell oil and gas and he had just recently come to work for Shell WindEnergy. A general message going through his speech was the need for making wind energy industry standards. The quality in off-shore wind energy business activities can be ensured, he argued, by drawing ‘on some of the standards that have already been developed by the oil industry’. These oil and gas related standards can be used with some elaboration by the wind energy industry. He urged the wind industry associations to work hard on developing such industry-wide wind energy standards. As it appears, Shell wants wind turbine companies such as Vestas to go through a learning curve that will enable Shell to be able to rely on the wind turbine technologies. Standards must be developed and lived up to for wind energy to become as reliable as conventional energy technologies. When interviewing the Director for the Danish Wind Industry Association he talked about this learning situation that the large energy companies has put the wind turbine industry in. He said: ‘All the experiences the old oil and gas engineers in oil companies have gained in the North Sea we can definitely learn a lot from. And it is such knowledge that the oil companies bring into the wind energy business and that knowledge can increase the quality and the solidity of our products. What happens technologically these years is a major technological jump, because the old engineers from the energy companies, they are those that install and run the wind turbine parks and that means that these engineers demand that the standards that conventional energy sources are living up to, should also be the standards the wind energy parks live up to. That is a major challenge for the wind energy industry – and it is not always easy, because the standards are very high - but this is what will make it possible for the wind industry to take the next step – and make wind energy parks that functions as reliably and as well as conventional energy technologies.’ Not least Vestas appears very willing to learn not least the Shell lesson. This, lesson will probably bring Vestas even closer to Shell’s rule-based centralised business model. However, in the belief-driven sense-making process developing between Shell and Vestas these years, the self-fulfilling prophecy does not stop by making Vestas

the best wind turbine company able to provide the wind turbines of the needed high quality. The learning goes both ways and Shell is in the same learning process to shift from fossil fuels to eco-effective wind turbines.

The Vestas CEO started his key note speech at the conference by making clear that there are ‘tremendous potentials in off-shore wind developments’. As a company that is born green, Vestas has strong green business beliefs. Such beliefs functions as ‘important engines (Weick, 2001:27)’ in belief-driven sense-making. He then went on to discussing off-shore business expectations. He started this discussion by referring to an advert that Shell had in the Wall Street journal just prior to the conference. The Vestas CEO explained: ‘The advert says: Can the North Sea continue providing energy indefinitely?’ The answer in the advert is yes, said the Vestas CEO continuing: ‘The interesting thing is who put the advert? This is from Shell and it relates to a big off-shore wind turbine park project in the Dutch part of the North Sea that Vestas has the pleasure of doing together with Shell. This is, at least from the Vestas perspective, a clear indication of what is happening in our industry. This is an industry that is being embraced and is going to be developed hand-in-hand with the already well known providers of energy like Shell.’ The Vestas CEO continued stressing Vestas’ considerable experiences off-shore and reported that Vestas is responsible for 54% of the total installed off shore wind capacity world wide. Also, like Shell has established Shell International Renewables, Vestas has just - reported the CEO - established a new off-shore business unit. Vestas has established this new business unit, because ‘we are fully aware that it just does not happen...We all have to be ready to take some calculated risks...we need to do this together and we need to be very open about it otherwise we will not realise the real potential in off-shore...It is not just a question about wind turbines. It is about a new way of thinking and a new state of mind, which we need to get into all of us – how we are going to develop this in the years to come. And as I said, we rely a lot upon our partners in order to help us and hopefully we can also

help them to make sure that the wind turbines are going to grow up also off-shore in the years to come. We are putting a lot of effort therefore into our R&D...And this is not just because we want to do things the way we have done it. It is also because we want to think differently on how to develop this business both on- and off-shore. No doubt the wind is there and definitely I can say on Vestas' part that our will is there and of course we need to discuss are you going there? Are we going there?' As it appears, Vestas is willing to 'go there' and turn Shell's advert into a self-fulfilling prophecy – make the North Sea a major wind energy producing area. Vestas are ready to make their part of the self-fulfilling prophecy come true – that is, develop and provide the right quality off-shore turbines. Vestas puts 'a lot of effort' into R&D to this end and has also, as stressed by the CEO, already gained a lot of experiences by being the leading off-shore wind turbine company. In discussing the way to make Shell and Vestas' emerging shared business expectations a self-fulfilling prophecy the CEO talked about a new mindset of 'thinking outside the box'. This mindset is a mindset, where new and old energy players make green sense together and develop the wind business in close co-operation. As it appears, the Vestas CEO ended his speech by asking 'are you going there? Are we going there?' In other words the Vestas CEO wants to be reassured that not least Shell is also 'going there'. He wants to know, if Vestas and Shell share the same off-shore wind expectations. He wants to know, if they are together in the process of making a self-fulfilling North Sea prophecy come true.

In Shell WindEnergy's speech that came right after Vestas' speech Shell WindEnergy's General Manager for Global Operations replied directly to the Vestas CEO's final remarks. He said in ending his speech: 'We talk about thinking out side the box. I think it is time to do that...if we carefully consider and capitalise on the synergies we can create a viable and sustainable energy alternative in off-shore wind.' Thus, the answer from Shell is: Yes, Shell thinks it is time to think outside its own box and jointly develop the off-shore wind energy business.

However, as was clear from Shell WindEnergy's speech, Shell will only 'go there' if Vestas learn from the experiences gained in off-shore oil and gas, for off-shore wind power plants to live up to the standards of conventional energy sources. Thus, the North Sea is only going to become a wind energy producing area, if Vestas can supply Shell with the right quality products. This is why Shell WindEnergy is so focused on this particular issue and why Vestas is so responding. Drawing on Weick's (1995) example again, it was exactly because the teacher was so focused on the supposedly best students and these students so responding that the students in the end, in fact, became the best students. Thus, Shell and Vestas have started the process of turning their shared North Sea wind business expectations into a self-fulfilling prophecy. However, Vestas must make the first phase of the self-fulfilling prophecy come true first, that is prove that they are the best company in the wind energy industry - as Shell defines it, be able to live up to the values and standards in Shell's oil related generic subjectivity.

After Vestas and Shell's speeches the CEO from Siemens Wind Power also held a speech. He was much more cautious than Vestas as concern the speed of the off-shore wind energy developments in the years to come. He said: 'Let us not be too ambitious and do everything at the same time – develop bigger turbines, go into extreme water depths, weather and wind conditions and distance to on shore – let us do it stepwise – and I think that is the way to success'. In other words, German Siemens, that recently bought Denmark's second largest wind turbine company Bonus, is questioning the speed with which Vestas seeks to enact the emerging expectations of turning the North Sea into an energy producing area beyond the oil era. Implementing this expectation will require bigger and bigger turbines that are installed in more and more harsh environments longer and longer from the coast line. Siemens wants to do this step wise. Vestas' success in using their strong green beliefs as engines in their joint sense-making with Shell is in that sense a threat to Siemens, because Siemens will have to bridge the gaps in the future relating to new

technologies and markets as one of Vestas' key competitors. And, in fact, the conference is illustrating in itself that effects on markets (Callon, 1998) have started to emerge from Shell and Vestas' joint sense-making. The off-shore wind energy conference had to this end invited a large number of European policy makers, since the regulatory environment the off-shore wind energy faces is not currently optimal for the wind industry. The conference ended up making concrete recommendations for how EU policy-makers can assist Vestas, Shell and other companies involved in wind energy in substantially expanding off-shore wind markets in Europe in the coming decades.

DISCUSSION

In answering the overall research question I contribute both to advancing descriptive green business research and based on that I also provide new ideas on how to advance sustainable business development in practice (Welford, 1998). Two things appear to this end to be key characteristics of *green belief-driven sense-making processes capable of contributing to increased eco-effectiveness*. First of all, the company, that is not born green (in this case Shell), must be able to make sense of the greening as 'something that has happened before (Weick, 1995:170)' and to this end also be able internally to develop 'socially acceptable justifications (Weick, 2001:26)' for the new green business developments. In other words, moving beyond the eco-efficiency level towards improvements in eco-effectiveness (Dyllick and Hockerts, 2002) must be facilitated through designing the greening in ways that are increasingly sensitive towards internal cultural and social aspects, including job security, in the company that is in an eco-effective transition. Secondly, key to green belief-driven sense-making processes capable of contributing to increased eco-effectiveness is also the strong green beliefs of the involved company that is born green (in this case Vestas). These strong green beliefs, stemming from the green company's ecocentric generic subjectivity, can function as 'important engines (Weick, 2001:27)' in the joint green sense-making.

Without the momentum created by such strong green beliefs there would not be the same level of green innovative intersubjectivity and thereby the same level of pressure on the existing controlling generic subjectivity in the sense-making going on in the company that is not born green. This is so, because a company, that is not born green, will tend to have hesitant green beliefs, which cannot on their own produce the same momentum in the green sense-making. Thus, drawing on Weick (1995), it can be argued that the tension between the innovation (in this case, Vestas' strong ecocentric beliefs) of intersubjectivity and the control of (in this case, Shell's) generic subjectivity animates the green organizing going on between Shell and Vestas.

It is mostly Shell International Renewables - Shell's green business unit - that wants Shell to contribute to sustainable development through adopting eco-effective renewable energy technologies. Thus, what Shell International Renewables has done to this end is facilitating their desired greening of Shell through drawing on their knowledge about Shell's oil related generic subjectivity. This knowledge has made them single out Vestas as an interesting business partner and off-shore wind energy as an interesting eco-effective technology for Shell. While it probably is a culturally important factor for the relationship that both Shell and Vestas are technology driven companies, it seems anyway that the choice of technology has been the most important factor. This is so, because it is off-shore wind technologies that can facilitate that Shell oil and gas employees - who are those that have the competencies to install and run large-scale off-shore installations - can sustain their jobs in addressing the basic uncertainties that Shell faces these years. Thus, while Vestas' on-shore wind technologies might be more developed and also cheaper, it is Vestas' off-shore wind energy technologies that are able *in practice* to facilitate Shell's greening. In other words, a too simple economic logic appears not to be the most useful logic for understanding and triggering sustainable business development. Not least in eco-effective greening processes both the economic component, but also the cultural and social component in the greening process, must be

analysed in depth and handled accordingly. This is, as described above, what Shell International Renewables appears to be doing in Shell.

Assisting Shell International Renewables in its desire to green Shell is, according to the Director for the Danish Wind Industry Association, not least that investors increasingly tend to favour new wind projects over more fossil fuels projects in Shell. This pressure from the investors is, according to the Director, what makes Shell International Renewables confident that Shell oil and gas will have to continue assisting in Shell's emerging wind business efforts. And while Shell oil and gas employees might like their old oil and gas job better, they probably can live with the second-best alternative – that is, use their off-shore competencies in off-shore wind business developments, while addressing the basic uncertainties Shell faces because of climate change and oil depletion. The question still remains, however, how fast Shell will progress in their eco-effective transition to off-shore wind energy business. For Shell to speed up its eco-effective transition, it seems that not just Shell International Renewables, but Shell - as a company - must become proactive in sustainable business development.

Becoming proactive in sustainable business developments appears, however, to be difficult not just for Shell, but for all oil companies. For long these companies, including Shell, have resisted external pressures to green themselves (Ketola, in press). These companies have tended to see environmental issues as a threat and have to this end traditionally favoured strategies of regulatory compliance (Sharma, 2000). Even Shell's establishment of Shell International Renewables in 1997 was not a proactive move, but a reactive move triggered by the Kyoto protocol. The move was, furthermore, a delayed reaction not triggered until *after* BP reacted to this new green regulation. The Financial Times explains 'The Shell move follows a recent announcement by British Petroleum, which vowed to become a world leader in solar energy with a \$ 1 bn turnover target by 2010. It also comes just two months before governments gather in Kyoto, Japan, to discuss

legally binding targets to reduce the emission of greenhouse gases (FT, 17 Oct 1997).’ As indicated by The Financial Times the Kyoto protocol and BP’s faster reaction to it had an effect on Shell’s renewable energy business. However, bridging gaps to regulation and faster reacting competitors can be done, in the short run at least, without major changes in a company’s existing generic subjectivity. Thus, it can be done without becoming proactive in greening business. This also seems to be confirmed by Ketola (in press), who has analysed the developments the last decade in oil companies’ corporate values. Her analysis shows that despite the increasing green external pressures on oil companies, these companies, including BP and Shell, are still rooted in their old oil and gas related values.

As argued by González-Benito (2006), all the multinational oil companies belong to a group of companies that find themselves under particularly intensive green stakeholder pressure. Such pressure is, according to González-Benito (2006), a key factor in developing a proactive green business position. However, as discussed above, this proactive position has not yet emerged in Shell, or the other large multinational oil companies. Since managerial perceptions of ongoing stakeholder pressures are the other key factor in companies’ development of proactivity, according to González-Benito (2006), this could indicate that managerial perceptions are a key barrier to greening in the oil companies. Interestingly, since engaging with Vestas might develop more and more through the strategic level in Shell, this engagement might be able to assist over time in making Shell managers better able to see the natural environment as an opportunity (Sharma, 2000) and thus finally advance Shell to a proactive position (González-Benito, 2006). Another development that will also likely assist in making Shell more proactive is that the father of Shell International Renewables, Jeroen van der Veer, since 2004 has become the top manager in Shell. A development in Shell that the Director for the Danish Wind Industry Association said the wind industry has noted with interest.

If Shell manages to develop a proactive position the company might seriously speed up the process of turning the North Sea into a major green energy producing area. While this development will contribute to eco-effectiveness and intergenerational ecological equity (Dyllick and Hockerts, 2002), it is at the same time clear that the process will also contribute to sustain Shell's position in the global energy market. In sustaining this position Shell's traditional anthropocentric business model will also be sustained, although it should be noted that contemporary dynamic business environments tend to increasingly favour organic organisational structures (Burns and Stalker, 1961). Likewise, small ecocentric companies, such as Vestas, grow bigger and internationalise - even if they do not pursue increased interaction with large anthropocentric companies such as Shell. Thus, these companies sustain their ecocentric technology, but their business model is likely to adopt some characteristics from the traditional anthropocentric business model, while also sustaining some of their ecocentric organic characteristics increasingly favoured by dynamic contemporary business environments (Burns and Stalker, 1961). Thus, this article suggests that contemporary sustainable business development *in practice* is business that embraces both ecocentric and anthropocentric values. In case of Shell's new green business of installing major off-shore wind turbine parks, man can be viewed as both over and under nature – that is, conquering hostile nature in a sustainable way.

CONCLUSION

In this article I contribute to descriptive green business research on how processes of eco-effective greening of business unfold in the practical reality. To this end I draw, in particular, on descriptive organisational sense-making theory (Weick, 1979, 1995, 2001; Sharma, 2000). Using the interaction between the multinational oil company Shell and the world's largest wind turbine

company Vestas as a case the article describes how an intensified process of shared green belief-driven sense-making among these two companies has produced an emergent consensus in their off-shore wind business expectations. The potential results of realising these expectations could be that the North Sea and other off shore locations are sustained as major energy producing areas beyond the oil era. The article proposes in conceptualising green belief-driven sense-making processes capable of contributing eco-effectiveness that companies, that are *not* born green, can considerably advance their green belief sense-making by interacting with companies, that *are* born green, and hold strong green business beliefs. Such strong green beliefs can function as important engines in the shared green sense-making. The sustainable business development that emerges out of such relationships might be characterised by a mixture of ecocentric and anthropocentric values. In this mix man is viewed as both over and under nature – that is conquering nature in a sustainable way.

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