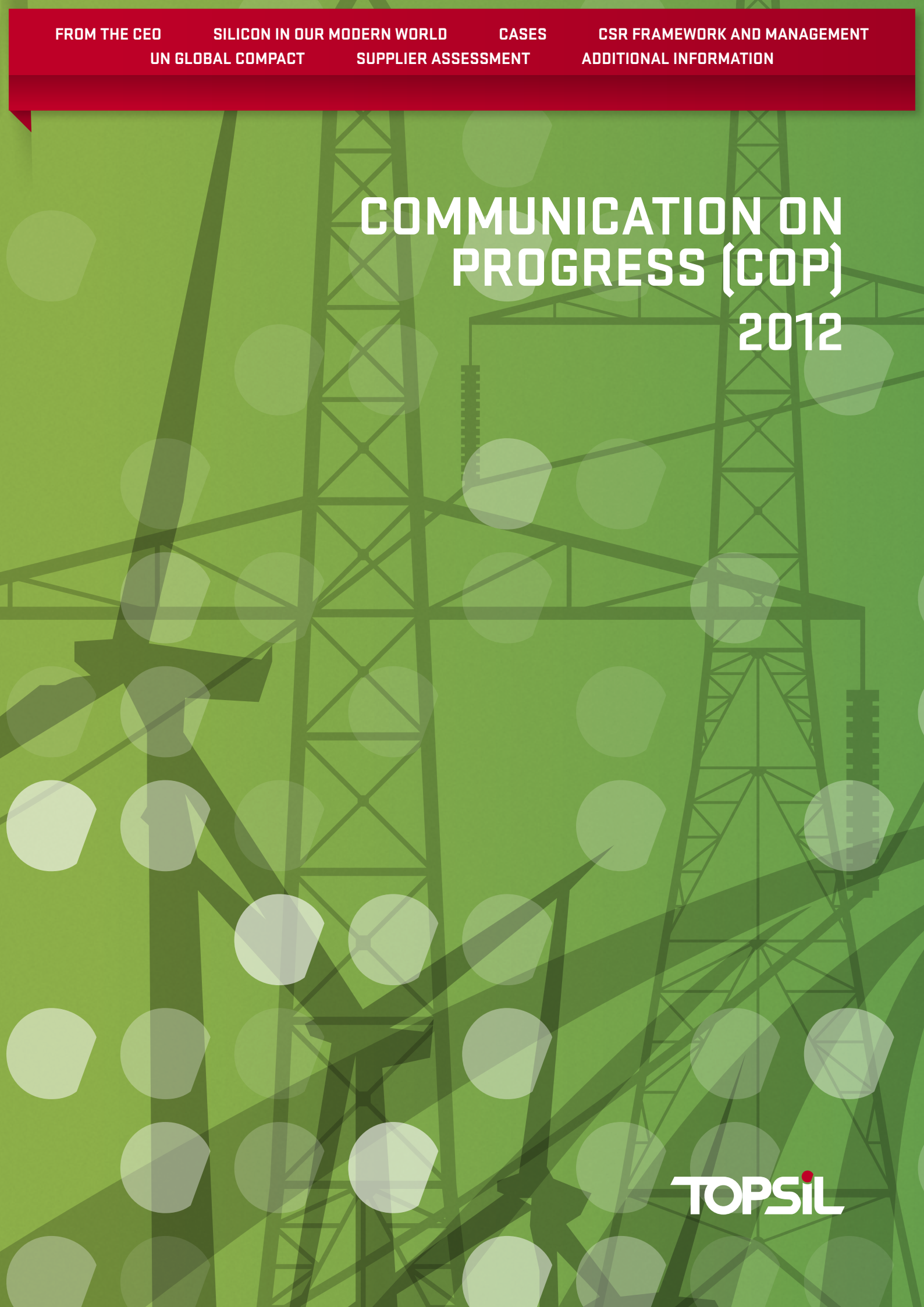
# COMMUNICATION ON PROGRESS (COP) 2012



TOPSIL

# IT IS OUR MISSION TO PROVIDE SOLUTIONS THAT ENABLE CUSTOMERS MANUFACTURE ADVANCED, ENERGY EFFICIENT POWER COMPONENTS.

Topsil Semiconductor Materials A/S hereby reconfirms its continued support of the UN Global Compact in the below statement:

March 2013

**UNITED NATIONS GLOBAL COMPACT**

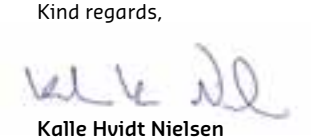
On behalf of Topsil Semiconductor Materials A/S I hereby reconfirm our company's continued support of the Ten Principles of the United Nations Global Compact in the areas of Human Rights, Labour, Environment and Anti-Corruption. We thus acknowledge our ongoing responsibility to balance the economic interests of our company with those of our stakeholders and the environment. We furthermore commit to share this information with our stakeholders using our primary channels of communication.

In this annual Communication on Progress, we describe our actions taken in 2012 to improve our performance on CSR related matters. We are still relatively new to introducing CSR to our organisation, however, compared to when we took our first small steps in 2010, we believe to have made notable progress during the last couple of years.

Once again in 2012, we have especially strengthened our environmental performance. Our new corporate headquarters includes a vast number of state-of-the-art technical solutions that will also have a positive environmental impact, and our most recent consumption figures on key equipment speak for themselves. We have recently obtained an environment certification, ISO14001, which will further aid us monitor and improve our environmental performance in the years to come.

Also worth mentioning for 2012, we stepped up on our efforts concerning anti-corruption by formulating and communicating detailed guidelines to our organisation.

Kind regards,



**Kalle Hvidt Nielsen**
CEO

> We are proud that Topsil's ultrapure silicon wafers are an essential part of intelligent energy solutions.

*Kalle Hvidt Nielsen, CEO*

# SILICON IN OUR MODERN WORLD

## WIND TURBINES

A wind turbine must be able to catch the wind and to rotate, generate electricity and connect to and disconnect from the power grid depending on the wind force. Intelligent electronics is required for operating wind turbines and transporting energy.

Silicon plays a role in this context and is used in the electric components of the wind turbine nacelle.
It is also used in the transformer system picking up the energy and distributing it to the power grid.

## ELECTRIC AND HYBRID VEHICLES

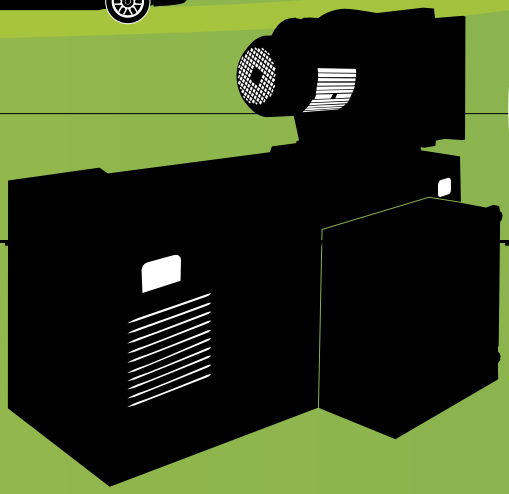
In future, more electric cars and hybrid vehicles on the road may be anticipated. However, they can only run if their batteries are charged beforehand, and it is only possible to shift to a higher or lower gear if the electricity supply is regulated.

Silicon may be used for energy-efficient electricity supply and regulation. Silicon is used, for example, under the bonnet and in the charger for the car.

## PRODUCTION MACHINERY

The industry needs electricity to manufacture products. Production machinery requires turning on and off, and speed needs to be adjusted up and down.

Silicon is a highly efficient material with premium electrical properties. It contributes to optimum machinery control and lower energy consumption and is found in the machinery control mechanisms and the electric motors.



## DID YOU KNOW THAT...

- Topsil's is a dedicated manufacturer of ultrapure silicon. The silicon is so pure that only a handful of companies in the world have sufficient knowledge and capabilities to produce it.
- Topsil provides silicon in the form of wafers. The wafers are inserted in electrical components and end up in various end-user applications.
- Topsil was founded 1959 by the Dane Dr. Haldor Topsøe. It is publicly listed on the Nasdaq OMX Nordic stock exchange and is headquartered in Copenhagen Cleantech Park, Denmark. It has a subsidiary in Warsaw, Poland.
- Topsil's customers are primarily large multinational corporations in the semiconductor industry and for a minor part, research institutes and universities worldwide.
- The mega drivers for Topsil's main market, the power market, are population growth and a global rise in per capita income. More - and more affluent people and societies - will lead to an increased demand for energy and energy infrastructure, transport investments and energy effectiveness. In order to exploit this market potential, Topsil has invested substantially in new facilities, technology and equipment 2010-2012.
- Topsil's expected revenue in 2012 is DKK 260-280m. In 2012 the average number of employees was 358.

Learn more: **www.topsil.com**

## POWER GRIDS

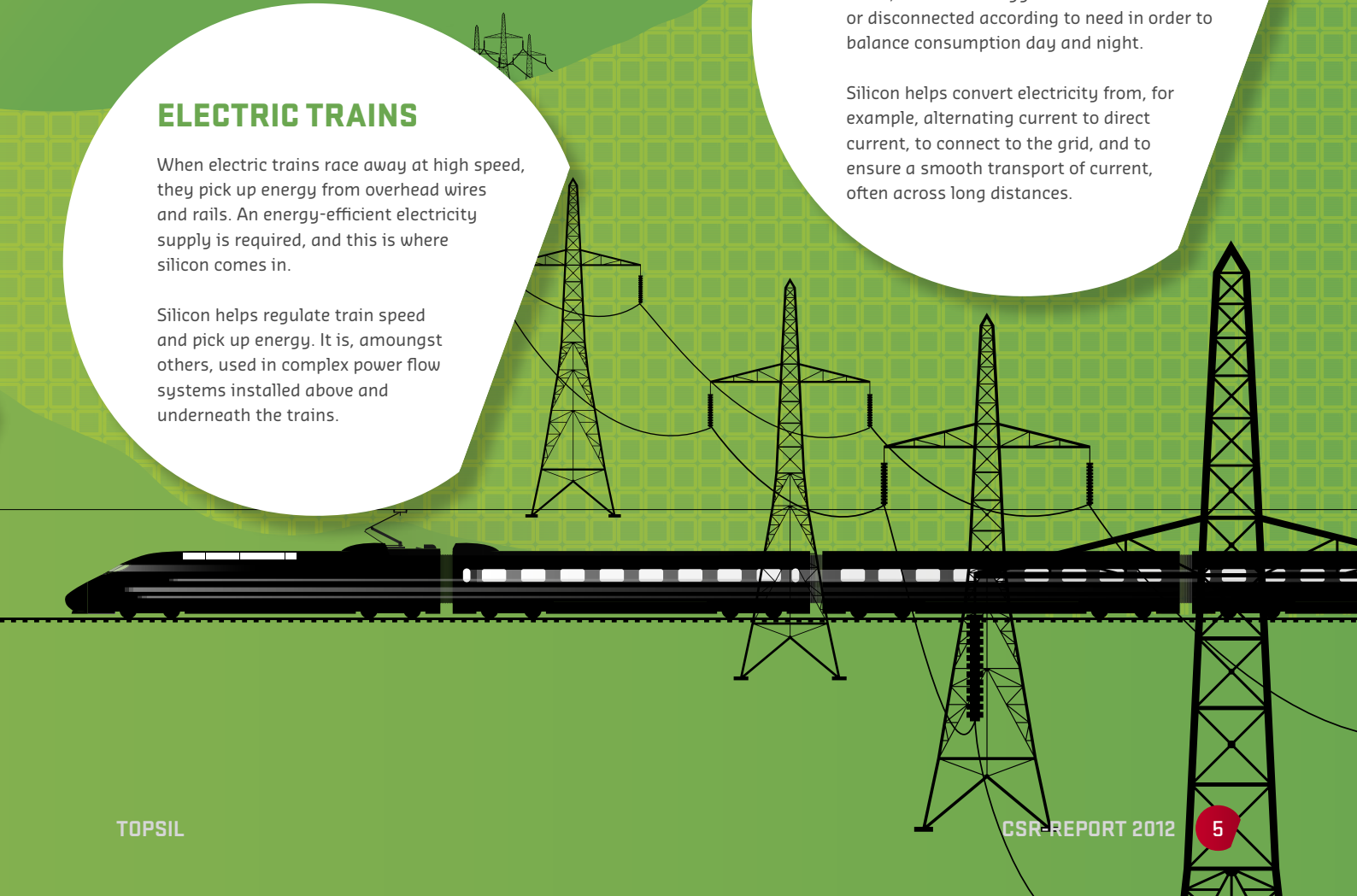
Silicon contributes to energy-efficient transport of electricity. In the intelligent electricity distribution network of the future , "Smart Grids", different energy sources are connected or disconnected according to need in order to balance consumption day and night.

Silicon helps convert electricity from, for example, alternating current to direct current, to connect to the grid, and to ensure a smooth transport of current, often across long distances.

## ELECTRIC TRAINS

When electric trains race away at high speed, they pick up energy from overhead wires and rails. An energy-efficient electricity supply is required, and this is where silicon comes in.

Silicon helps regulate train speed and pick up energy. It is, amoungst others, used in complex power flow systems installed above and underneath the trains.



Society

# GETTING TO KNOW TOPSIL: **SUSTAINABILITY WILL AID DRIVE OUR BUSINESS FORWARD**

> In recent years, Topsil has made substantial investments in its new, environmentally friendly, state-of-the art silicon plant, supporting the production of next-generation silicon wafers. The new plant offers the possibility of using surplus heat from production for heating offices and utility water. As a result of the total investment programme, new and more environmentally friendly production equipment is underway. However, environmental improvements are not only made in-house; in fact, increased demand for energy efficiency is expected to drive growth in the semiconductor industry and consequently at Topsil in the years to come

*Kalle Hvidt Nielsen, CEO*

The new plant in Frederikssund, Denmark, officially opened on 1 October 2012. The visitor's list included foreign customers and suppliers in addition to other business partners and a number of politicians of whom the most prominent was the keynote speaker, EU Climate Commissioner, Ms. Connie Hedegaard. She had taken the time to fit a visit to cut the ribbon into an otherwise tight Commissioner's schedule. The opening also marked the relocation of the first enterprise in Copenhagen Cleantech Park.

"We chose to organise an event where, more than anything, we could celebrate the day with our customers by presenting a state-of-the-art silicon plant" explained CEO of Topsil, Kalle Hvidt Nielsen. "At the same time, we took the opportunity to promote a somewhat broader agenda which is the connection between sustainability and business because ultra-pure silicon and intelligent power consumption are invariably interconnected."

*EU Commissioner for Climate Action, Ms. Connie Hedegaard, at the Grand Opening of Topsil's new plant.*

*The Climate Commissioner cuts the ribbon attended by Kalle Hvidt Nielsen and Frederikssund Mayor, Ole Find Jensen.*

*Topsil EVP, Jørgen Bødker, at the Grand Opening in front of a hybrid plug-in showcase.*

It is therefore no coincidence that Topsil is now located in the Copenhagen Cleantech Park, where an environmental profile is a requirement, or that Topsil specifically wanted the Climate Commissioner to give the opening speech, a speech focusing on seizing the opportunities to convert climate consciousness into business.

Nor is it a coincidence that, on the morning of the opening celebration, Topsil hosted a round table debate in which a number of decision-makers and investors were given the opportunity to discuss with the Climate Commissioner the relationship between political vision and concrete action. There may be a need for this in times when substantial global investments in e.g. sustainable transport and infrastructure solutions are a long time coming. However, Kalle Hvidt Nielsen is convinced that this will change because the underlying trends remain the same.

"When more people become part of the global middle class, pressure on electricity will rise and along with it the demand for good, energy-friendly solutions", he said. "Higher demand drives a need for establishing more, better and more finely meshed power grids around the world. The new systems need connection and perhaps even the cutting in and out of several types of energy sources in the day and night. This includes both renewables and conventional sources. At the same time, the energy transported must be used in the best possible way, meaning without any energy loss and thereby wastage".

The same trend can be seen in the industry and transport sectors. Here, the trend is also moving towards more energy-friendly solutions: Industrial machines that use the smallest amount of energy possible. Energy efficient long-distance public transport in high-speed trains in countries such as China, and more electric cars and hybrid vehicles on the roads, developed by Japan, among others. But, then, where is the connection between the long-term trends and silicon?

"In popular terms, silicon is involved everywhere where you can turn electricity up and down, where a switch is turned on and off or where electricity is to be converted" Kalle Hvidt Nielsen explained. "Ultra-pure silicon which is the type of silicon we specialise in producing contributes to optimising energy consumption. It doesn't contain interfering elements or impurities which may prevent electricity from passing smoothly from A to B. It allows for smooth transport of electricity from different energy sources and across large distances. In other words, silicon constitutes a core element of a large variety of technically demanding and energy-saving components".

So when the industry at large and business research agencies look ahead and forecast future trends, there is consensus that in spite of a lower propensity to invest in the short term, the long-term trend is favourable. In recent years, several plants have been extended in the semiconductor industry, and it was precisely when applying that approach that Topsil chose to invest and build a new plant back in 2010.

This is also precisely why the new plant has been designed in a way that allows for easy extension in future.

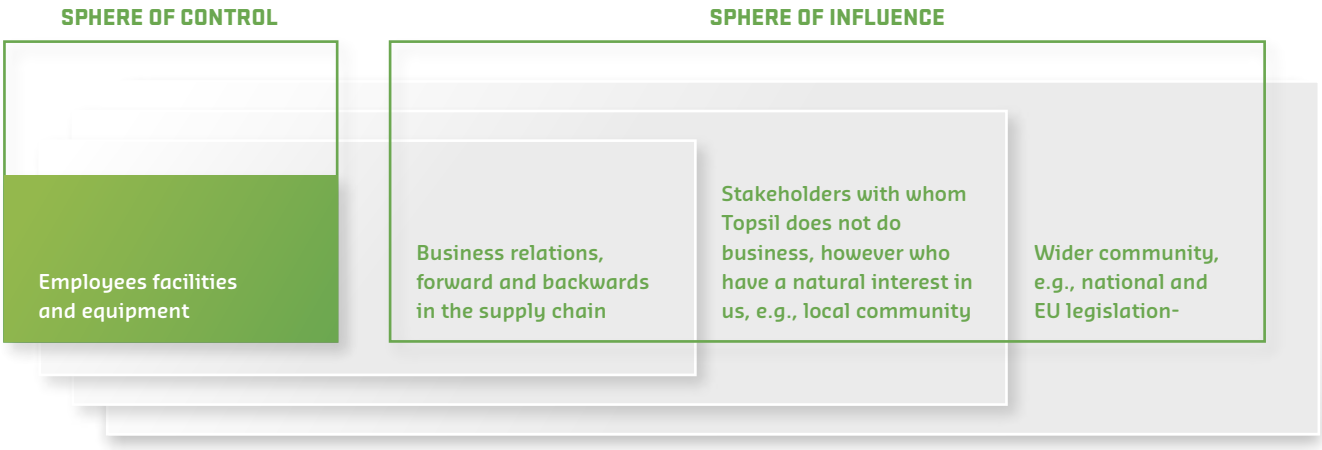
# CSR FRAMEWORK AND MANAGEMENT

Topsil established a firm framework for its CSR related activities right from the initial management discussions on the subject in 2010. This first step drove management to relate CSR to business strategy, to identify main business risks and risk likelihood in terms of not least environmental and employee related matters, to calculate improvement potential and subsequently to decide and prioritise improvement efforts.

Since the initial steps, refining the original framework has been an ongoing procedure, in essence driven by appointed managers.

**A STEPWISE APPROACH**

Due to our company size, CSR-maturity level and resources available it is Topsil's philosophy to improve our efforts step by step by first and foremost putting our own organisation in order.




This implies that we started out by mainly focussing and measuring on our sphere of control (see figure above) and have now expanded also to evaluate key suppliers on a number of parameters, including that of CSR performance.

Within our sphere of control, we continually monitor our performance by setting corporate goals year-on-year. Hence, we have set up KPIs for environmental and safety performance.

> It is our fundamental belief that sustainable business results can only be obtained when corporations understand and respect their social responsibility"

*Kalle Hvidt Nielsen, CEO*

# HUMAN RIGHTS PRINCIPLES

## TOPSIL SUPPORTS ALL PRICIPLES CONCERNING HUMAN RIGHTS

- **Principle 1:** Businesses should support and respect the protection of internationally proclaimed human rights; and
- **Principle 2:** make sure that they are not complicit in human rights abuses

## POLICY ON DIVERSITY

Operating globally, Topsil regards a diverse workforce as an asset. We hire on the basis of talent and personality and offer the same possibilities to all employees, regardless of their background, religion, political conviction, gender or age. We encourage that everybody reach their full potential in accordance with personal ambitions and goals.

We promote a work environment of respect and inclusion and expect our employees to act politically and religiously neutral, when acting on the behalf of the company. We acknowledge the right to organise and bargain collectively and do everything in our power to avoid discrimination.

### GOALS FOR 2013

Topsil believes that transparent communication on the general company climate will contribute to maintaining a healthy company culture. In 2013, Topsil will continue to measure its overall company climate through individual appraisals and the biannual employee survey, next time planned for late 2013. The results of the employee survey will be communicated to management and staff alike.

### ONGOING ACTIVITIES

According to the Danish Companies Act, Topsil's staff has a statutory right to elect a number of Board of Directors representatives on the main board, corresponding to half the number of externally elected members. Hence, two Topsil employees are full members of the Board.

According to EU legislation, Topsils calls for works council meetings on a regular basis, in which representatives from management and appointed employees have the possibility to discuss the overall situation and working climate of Topsil. The minutes of these meetings are made available to all local staff.

Topsil's seniority, distribution of gender, age and ethnical composition is publicly available here: www.topsil.com.

### MEASUREMENT OF OUTCOMES

Figures on the composition of staff is made available to management. The results of the employee survey is presented to management for decisions and further actions.

# LABOUR RIGHTS PRINCIPLES

## TOPSIL SUPPORTS ALL PRINCIPLES CONCERNING LABOUR RIGHTS

- **Principle 3:** Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
- **Principle 4:** the elimination of all forms of forced and compulsory labour;
- **Principle 5:** the effective abolition of child labour; and
- **Principle 6:** the elimination of discrimination in respect of employment and occupation.

## POLICY ON SAFETY

Safety must be top of mind when Topsil employees go to work. It is our position that all accidents can and should be prevented and that all hazards must be minimised through ongoing, structured efforts. Literally speaking, we want our staff to go home from work as healthy as they were when they arrived at their work place.

In order to obtain this goal, it is a continuing objective to prevent accidents and work related ill-health through effective management, administration, education and training.

### GOALS FOR 2013

Topsil strives to obtain an ultimate goal of zero work related accidents, defined as any work related injury, resulting in one or more days of absence. Topsil scrutinises each work related accident to prevent recurrence.

### ONGOING ACTIVITIES

The health and safety of any Topsil employee is guarded through our health and safety bodies on each company location. The safety organisation consists of management and staff representatives and is overall responsible for Topsil's health and safety performance. The safety organisation oversees compliance with applicable legislation and plans activities to continuously improve performance.

### MEASUREMENT OF OUTCOMES

Management regularly follows up on Topsil's safety performance. This is done by presenting corporate safety figures to management every three months at a management evaluation meeting.

# ENVIRONMENT PRINCIPLES

## TOPSIL SUPPORTS ALL PRINCIPLES CONCERNING THE ENVIRONMENT

- **Principle 7:** Businesses should support a precautionary approach to environmental challenges;
- **Principle 8:** undertake initiatives to promote greater environmental responsibility; and
- **Principle 9:** encourage the development and diffusion of environmentally friendly technologies

## POLICY ON THE ENVIRONMENT

Topsil continuously strives to reduce the environmental impact of our operations by integrating environmental consideration into any activity with an environmental impact.

We give priority to areas where we believe the effect will be greatest, and commit to working methodically with reducing our energy consumption and waste, year on year.

### GOALS FOR 2013

In 2013, Topsil has set up goals to minimise the consumption of energy, water and chemicals for the current production sites.

Overall targets for the new plant will be set no later than 2014.

### ONGOING ACTIVITIES

Topsil's new production plant and headquarters officially opened in October 2012, however, the installation of more environmentally friendly equipment is ongoing. Paper and waste is now recycled to the largest possible extent.

Topsil became certified to the international environment standard ISO14001 in 2012. This has provided the organisation with a considerably improved framework for auditing and for measuring progress year-on-year.

### MEASUREMENT OF OUTCOMES

Topsil monitors its environmental performance on a three-monthly basis at a management evaluation meeting.

Facility

# RECYCLING GRINDING WATER: **A LUCRATIVE BUSINESS BENEFICIAL TO THE ENVIRONMENT**

> Before Topsil invested in its new water treatment equipment, water consumption for its sawing and grinding machines was ten times the current level. Topsil uses roughly 40 cubic metres every 24 hours in the preparation of raw silicon for remelting into ultra-pure silicon. More than 80% of the water is now re-circulated using the water treatment equipment, benefiting the business as well as the environment.

*Thomas Bisgaard, Project Manager*

The new equipment has been in use for quite a while now, and the numbers don't lie: Today, Topsil consumes significantly less water now than before it started using the water treatment equipment in the production. The equipment was installed late 2010. Since then, the equipment has re-circulated more than 20,000 cubic metres of water. Now, it is time to review.

"We chose to invest in well-proven water treatment equipment tailored to suit our purpose," Project Manager Tomas Bisgaard said. "Before buying the equipment, we tested it carefully. We invested in reasonably priced equipment with a reasonable repayment period, benefiting Topsil in every way".

The equipment consists of a number of tanks and filters in a closed container. It purifies the water from the sawing and grinding machines, to such a high degree that it can be recirculated.

*Tomas Bisgaard showcasing purifed water from the water treatment equipment.*

It takes quite some amount of water to prepare raw silicon for remelting, and nowadays the used water is returned to the container. In the container, it is filtered in a number of macaroni-like pipes and the grinding dust is collected in a vessel. The re-circulated water is now so pure that it can be used again in the sawing and grinding machines. Just over 80% of the grinding water is recyclable this way.

In the regular follow-up on the water treatment system, the numbers don't lie. Topsil has been able to record a marked water consumption reduction in the production.

"We have tried using several other types of water treatment equipment in the past, but without getting even close to these good results," Tomas Bisgaard said. "The results are unmistakable, and that's why we would like to bring this happy story to light".

"The water treatment equipment is even dimensioned to handle increased silicon production. And in the future, we expect to be able to reduce our water consumption even further through various other measures," he said.

# ANTICORRUPTION

## TOPSIL SUPPORTS THE PRINCIPLE CONCERNING ANTICORRUPTION

- **Principle 10:** Businesses should work against corruption in all its forms, including extortion and bribery

## GUIDELINES ON ANTI-CORRUPTION

It is Topsil's fundamental principle that any business activity and relation with customers, business partners and authorities must be honest, fair and transparent and in compliance with applicable laws. We do explicitly not accept bribery or facilitation payment in any form and we do not permit gratitude activities between private individuals.

Topsil has set up an internally communicated set of guidelines concerning business related gratitude, i.e. how we handle gifts, entertainment and hospitality given or received by Topsil.

**GOALS FOR 2013**
Topsil does not plan any further anti-corruption activities in 2013.

**ONGOING ACTIVITIES**
The above-mentioned guidelines were adopted by the organisation in 2012.

**MEASUREMENT OF OUTCOMES**
In 2012, Topsil did not receive any reporting concerning non-compliance with the anti-corruption guidelines.

# SUPPLIER ASSESSMENT

Topsil runs a supplier assessment system that ranks its suppliers in relation to a vast number of parameters. The system, including its main parameters, is showed in the below figure. In the figure, corporate social responsibility forms part of the risk management assessment.

A number of evaluation criteria have been set up in relation to the various parameters. This enables a regular rating of new and current suppliers. Topsil addresses each criteria when screening and auditing its suppliers, and if a potential or current supplier fails to meet Topsil's expectations on a certain matter, the supplier will receive lower aggregated ranking.

When communicating its findings to the supplier, Topsil presents its findings and suggests improvement actions, including those concerning CSR.

Each supplier belongs to a certain supplier category, depending on its relative importance to Topsil, in terms of key manufacturing processes. The most business critical suppliers are ranked as A and B suppliers, respectively. They are reviewed every 3rd and 5th years, respectively.

# ADDITIONAL INFORMATION

## DISSEMINATION OF OUR COP REPORTING

- Topsil's COP for 2012 is published on Topsil's website www.topsil.com
- Topsil's COP for 2012 is published on the UN Global Compact website www.unglobalcompact.org
- Topsil's COP for 2012 is published on Topsil's intranet.
- Topsil's COP for 2012 will be communicated to our suppliers

## REPORTING PERIOD:

This report focuses on the CSR activities for Topsil's fiscal year 2012 (from 1 January 2012 through 31 December 2012).

## PUBLICATION:

Topsil signed the UN Global Compact 8 March 2011.

Current issue: March 2013
Next issue: Scheduled for March 2014, covering FY 2013

## FURTHER INFORMATION:

Further information on Topsil A/S to be found on www.topsil.com

In case of inquiries, please contact Communications Manager Ms. Christina Fris Bjørling,
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