

The Importance of Environmental Initiatives

By Guy Propper and Adi Sheleg

An Interview with Asher Grinbaum, COO of ICL

A major international corporation paves the way to a new understanding of efficient operation and environmental protection



From Basic Minerals to Value-Added Products

Israel Chemicals Ltd. (ICL) is one of the world's leading fertilizer and specialty chemical companies. With exclusive concessions to extract high-quality, low-cost minerals from Israel's Dead Sea and rights to mine the Negev Desert, ICL is a major producer of potash, potash and phosphate fertilizers, food grade phosphoric acid, elemental bromine, bromine compounds and magnesium. The company is also a significant player in specialty chemical high-margin niche markets. Its business is comprised of three core divisions, ICL Fertilizers, ICL Industrial Products and ICL Performance Products, and its major production activities are located in Israel,

Europe, the US, South America and China. The company benefits from major global marketing and logistics networks.

Mr. Asher Grinbaum has served in numerous key positions at ICL, from President and Chief Executive Officer of its ICL Industrial Products segment to President and Chief Executive Officer of the ICL Fertilizers segment. He is currently Executive Vice President and Chief Operating Officer of ICL. Mr. Grinbaum also serves as Chairman of the Chemical, Pharmaceutical & Environmental Society of the Manufacturers' Association of Israel. His broad experience has made him particularly attuned to environmental issues, both within ICL and externally.

Minimizing the Damage

“Man has been affecting the earth’s eco-balance since the industrial revolution,” Grinbaum explains. “Some say that this harms the planet while others argue that these forces are inconsequential and the planet, as a whole, can repair itself. Although I try not to take sides in this argument, I believe it would be best if we could refrain from damaging the earth. If we are honest, man’s activities are an established part of our modern world and a regrettable, but almost unavoidable, downside of our technological progress. If we want to drive cars, we need fuel, and if we need fuel, someone needs to extract the crude oil to make this fuel. Although fuel is of benefit to us, its extraction and refinement has a negative effect on the earth’s eco-balance.”

Environmental Initiatives Can Be Cost Effective

ICL operates numerous production facilities throughout the world. All ICL plants are committed to finding ways to improve production efficiency. Grinbaum argues that the benefits from production efficiency are twofold: reduced costs and less harm to the environment. “This is why we always try to achieve the highest possible efficiency – it is the most economical way to operate.”

According to Grinbaum, experience has proven that environmental initiatives have a financial effect up to a certain point, but beyond this point, return on investment drops. In the first stage, an industrial plant receives raw materials, consumes energy – usually from an external supplier – and creates products. In the chemical industry, these processes are often accompanied by chemical reactions and, as a result of process inefficiency, by-products are emitted into the air, water or soil. From the moment a reaction occurs, the plant incurs costs from these emissions. It may capture a portion of these emissions in the early

stages of the process by utilizing technology. For instance, gas and liquid emissions can be captured and recycled for reuse as raw materials. This is of significant financial value as the end result is a rise in cost-effective raw materials. However, at later stages, this solution becomes more expensive as the creation of recycled raw materials from process emissions involves other exogenous processes which consume energy and resources and thus generate costs that are higher than the end value of the raw material.

It is important to keep in mind that statutory regulations compel companies to achieve specific standards in order for them to obtain approval to market their products in respective jurisdictions. “When it comes to regulatory issues,” Grinbaum continues, “It is very important to invest in careful research and to work together with the authorities. This enables us to comply with regulations more quickly and easily. Such knowledge also places us in a position to help our customers meet their regulatory requirements. We work closely with our clients and supply them with the most advanced and economic operating technology to achieve even greater reductions in emissions than are required by their end consumers.”

Acting Beyond Compliance

When changes in regulations or internal risk management processes occur, manufacturers generally embark on an internal change process and ICL is no exception. However, ICL chooses to act beyond mere compliance and invest in the most advanced technology available which will result in the most economical solution for the foreseeable future and meet future regulations. “You can never know exactly what the regulations will be in 20 years, but you do know that lower emissions are always the best approach.”

According to Grinbaum, all new projects at ICL fall under the definition “beyond compliance”.

“Many new regulatory standards will trigger ‘beyond compliance’ projects at the company. For instance, if the regulator stipulates emission reductions of 5, we will cut them to 2.” This allows the company to always stay a step ahead and reduces the need for re-investment to achieve further reductions in the short to medium term.

All ICL’s improvement projects during the past two years have been conducted in line with “beyond compliance” guidelines. These include the absorption towers at one of the company’s plants, which are part of the emissions “catching” systems and which stretch across the vents of every 4-5 chimneys. These already comply with the respective standard and allow absorption of extra emissions, reducing overall emissions to virtually zero.

ICL also invests in the building’s insulation which leads to reduced electricity consumption, as well as lower air conditioning and heating costs. In addition, it has improved recycling processes and performance of energy accumulating batteries, thereby flattening the electricity consumption curve between high and low consumption. Grinbaum explains, “Another ICL standard is our zero tolerance to non-compliance with regulations at any of our plants around the world. If we are unable to meet the regulator’s terms, we shut down.”

“This year ICL will invest roughly \$120M in environmental initiatives, compared to approximately \$100M last year,” Grinbaum stated. “This major investment is not unique to ICL and many manufacturers are also investing substantial amounts, as industry comes to an understanding that this investment is a necessary part of our infrastructure and that our right to exist for the long run depends on our ability to comply with environmental standards. At meetings of the Chemical, Pharmaceutical & Environmental Society, you can witness a general consensus amongst

committee members, all of whom are senior managers in industrial organizations, that environmental regulations should be enforced and ‘beyond compliance’ steps should be taken. It will only take a few years for Israel to catch up with the standards in developed countries.”

Regulation is based on years of research which examines the influence of emissions on the population and environment. When researchers identify significant harmful influences, regulation is used to reduce the level of damage. “The main problem is predicting what will happen in 50 or 100 years,” Grinbaum explains. “This is why we keep seeing changes in regulations and why we feel an urgent need to invest in ‘beyond compliance’. It is a dynamic system and the regulations are usually only valid for a few years or are modified as a result of more recent research.”

Another important aspect is the competitive edge. Grinbaum explains that “In this modern day and age, companies which demonstrate environmental responsibility attract greater customer interest. Today’s global village creates a small world in which customers know who your suppliers are and then express an interest in working with companies which operate according to sustainable principles.” Grinbaum points out that there is now a global consensus that organizations which demonstrate social responsibility have a higher sustainability rate and are more profitable. “Businesses with a negative environmental influence are viewed by customers, suppliers and employees as having a questionable future over the long term. This either results in higher costs to rectify the business’ negative corporate image or in losing customers and eventually shutting down.” It is important to understand that immediate ROI can be found in preliminary investments while acting “beyond compliance” brings added value which, although it cannot be measured financially, most definitely contributes to the success of the organization.

National Perspective

As a long-standing member of the Manufacturers' Association, ICL continually requests that Israel's legislature, the Knesset, promulgate long-term legislation. Laws with no clear future will not be enforced by successive governments and thus have no real power. We are now beginning to see an indication of a long term legislative strategy in Israel, one aspect of which is enactment of a Clean Air bill, and the second is membership in the OECD (Organization for Economic Co-operation and Development). The OECD is an organization that looks 15–20 years ahead. Membership in this group is bound to be a blessing for manufacturers in Israel. From an ecological perspective, Israel's primary requirement is to enact long-term legislation.

Israel's Clean Air bill is highly progressive and sets goals for the future. It does not deal specifically with gas emissions, but focuses on the best available technology as a standard regulation. As Grinbaum explains, "Permits will be granted based not only on whether emission measurements have been met but whether the applicant has implemented the best available technology, to ensure that its pollution levels are as low as possible". In some industries, the regulations will be enforced from 2014. ICL is already embracing this issue, due to its global activities which require the company to comply with European standards in order for it to engage in business in the EU market.

Long Term Effect on the Planet

According to Grinbaum, all major organizations and industries have fully exploited their short-term return on investments, at least for direct investments, and thus implementing best available technology or acting "beyond compliance" cannot be measured in ROI terms, but only in long-term effect and accumulated benefits.



“To date we have minimized the gaps in emissions by about 90% to 95%. From now on, the struggle for each percent of emission reductions will cost much more, consume more time and require implementing ‘best technologies’. The industry as a whole is at a stage where it is no longer possible to measure environmental initiatives only in terms of ROI.”

The Kyoto Protocol signed in 1999 declared that global warming and its side effects are caused by GHG (Greenhouse Gas) emissions, particularly CO₂. Many other gases also contribute to this and the protocol defines a CO₂ equivalent measure for each so that all gases can be measured on the same scale. Since its enactment, certain countries and regions (e.g. the US and the EU) have been bound by the protocol’s decision to reduce their carbon footprints, while other countries have not. In order to reduce emissions, developing countries, which are primarily producers of resources but still lag far behind developed countries in exploiting available technologies, are now expected to employ the same standard of technology as developed countries. This is unrealistic for many countries. As a result, there is a basic recognition within the governments of developed countries that it is not feasible to set the same standard for all countries. Because of this inequality, it has been proposed that developing countries that can reduce their emissions “sell” those rights to countries which are obliged to reduce theirs, but cannot. This has led to major disagreements about whether reducing pollution levels should become a tradable commodity. For the first time, environmental initiatives are being given a financial value and playing a role in financial markets.

Grinbaum points out an interesting debate that has arisen from the newfound financial value of environmental initiatives – a debate between the benefit to the planet and the benefit to the local economy, which strives to develop and offer more job opportunities to its citizens. “For the

sake of argument, let’s say that I have a factory which emits 2 tons of GHG a year. I can close down the factory, fire all employees and sell my rights to a big plant in Europe. All in all, I’m saving the earth 2 tons of emissions, but I’m closing down a workplace and firing employees, thus increasing the level of unemployment and hindering progress.” This debate will only intensify as we progress toward greater tradeoffs between economic value and environmental activity.

In 2012 the Kyoto Protocol to prevent climate change and global warming expires. To maintain the process, there is an urgent need for a new climate protocol. On December 2009, the UNFCCC members met on a governmental level at the Climate Conference in Copenhagen, for the last time before the climate agreement was meant to be renewed. However, the conference ended with only a non-binding agreement by senior political representatives from participating countries.

In conclusion, while a company may embark on environmental initiatives due to the immediate ROI they bring or as a result of new regulation, going “beyond compliance” brings unquantifiable value that contributes to a company’s success. Grinbaum concludes, “I believe that prior to measuring everything in terms of money or CO₂, you have to commit to utilizing best available technology and going ‘beyond compliance’ and then look ahead and ask yourself if there’s a better way to do what you are doing. If the answer is yes, then do it.”

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