

# TCC GROUP

2021 Q3 INVESTORS' CONFERENCE

NOVEMBER 15, 2021

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## **CORPORATE PARTICIPANTS**

**Chairperson Chang**

**President Li**

**Senior Vice President Huang**

**Senior Vice President Lu**

**Vice President Wang**

**Assistant Vice President Yeh**

**Assistant Vice President Lai**

## MANAGEMENT DISCUSSION SECTION

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### Host of the Conference:

First, we invite Nelson Chang, Chairperson of Taiwan Cement Corporation (TCC) to give an opening speech.

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### Chairperson Chang:

Light is energy and the beginning of the universe. Light travels through the silent and dark space, to reach our planet.

Light supplies the Earth's heat and energy. The Earth, is essentially a huge, all-purpose battery and has stored, supplied, circulated, and nourished all life for hundreds of millions of years

Creation is the very origin of civilization, coming from water, fire and earth.

Through thousands of years of evolution, industry and technology were finally born. Human beings blend elements, creating the ideal mode of life according to their hearts.

Knowledge, technology, and people's hearts, eventually bring forth feast after feast of culture and civilization.

Cement is the bedrock of human civilization, accounting for more than 90% of its weight. It is solid and can stand the test of time. It built modern civilized life.

While human beings enjoy a wonderful life better than ever before, the price behind it is the imbalance between human's needs and Mother Nature, the imbalance between human and the Earth. These imbalances have brought disasters.

Experts and scholars across the entire world agree that human beings are the main reason for the drastic changes in the Earth's environment today. Whenever the environment changes dramatically, Mother Earth starts her fine-tuning.

The imbalance of Mother Nature is an original sin, everyone's true original sin. The French philosopher, Voltaire, wrote, "Everyone is guilty of all the good he did not do."

When the human mind believes the naïve and innocent fanciful thinking that we are able to conquer and colonize Mother Nature, it will have turned far away from Humankind. And Mother Nature will no longer be silent.

Nature is originally a self-sufficient and complete circular supply chain. However, the number of human beings has increased dramatically and ever-advancing technology provides the lifestyle demanded by most people. The resources consumed by human beings have for long far exceeded the basic needs for survival.

Behind the feasts hides a neglected and ferocious force. That is the “imbalance” of the broken ecological cycle, and Mother Nature no longer remains silent. Today’s climate change disaster is the counterattack of an unbalanced Mother Nature against humankind.

The Earth is not a colony of humankind.

Today, the side effects of prosperity created by humans are gradually emerging. Mother Nature is no longer silent; facing this dramatic upheaval. The cement industry, which is closely related to human civilization and Mother Nature, must be awakened. Standing at the very center of life, the cement industry must do its best trying to mend the unbalanced relationship between humans and Mother Nature.

Cement has always been the guardian angel of human safety. It is cement that guards the fragile human body and prevents the onslaught of strong winds and ocean waves. It is cement that allows humans to grow wings, to reach places that could not be reached on their own two feet.

Cement is the glue of civilization. Building bridges, paving roads, and constructing dams, it is a trustworthy guardian, allowing humankind to live in an urban life. No other industry could provide modern society with such solid and secure support.

Each generation has its own life situation to respond to and its own moral obligations to bear. Two hundred years ago, cement responded to the needs of human infrastructure, enhancing safety and quality of life. Two hundred years later, cement bears the imperative obligation of reducing carbon.

Nearly 200 countries in the COP26 today tried to reach an agreement to require everyone to reduce carbon emissions by 50% in 2030. What the cement industry pledges is the carbon neutralization target of 2050.

Runaway carbon emissions are the Great Flood of today’s generation. Our generation must write the story about how we chose to face it. We are duty bound to return intact the Earth we borrowed from the next generation. Decisive action is the only answer!

We believe that the development of human civilization always had its most important relationship with the use of energy. From the use of fire, to animals, to water, to wind, to electricity, to nuclear energy, to solar energy, human civilization uses more and more energy, but the rapid increase in energy use has also accelerated the burden on the environment. Since the Industrial Revolution, humankind has begun to create waste that cannot be recycled or circulated by nature. At the same time, it has also rapidly increased the emission of carbon dioxide in the atmosphere, resulting in runaway global warming.

The clock is ticking. We feel the melting of ice in Mother Nature every minute and every second as the hands of the clock advance. We understand the urgency of time every minute, every second, because of the deterioration of the environment right before our eyes. I believe, I hope, not everything will vanish into thin air, so we must do our best to fight against the emission of carbon dioxide and the passage of time. I have never worried about action but rather about inaction.

Due to TCC's experience in energy and waste treatment, we have some fundamental understanding of these issues. It began in-depth research a few years ago. We can help society to establish an appropriate entry point to this complex relationship between energy and waste. Therefore, the three main focuses of TCC development in the next 10 years are cement, energy, and waste treatment.

In terms of energy, TCC has invested in various aspects of green energy development, including solar, wind, geothermal, ocean energies...and other renewable sources of power generation. Renewable energy must be matched by electric power storage in order to provide the best synergy, so we will also invest in the development of energy storage, making the use of energy more and more available and diversified.

NHΩA, derived from Noah in the Bible, is the seed planted by TCC in the energy industry that has now begun to germinate. New HΩrizons Ahead is the first horizon to emerge on the route to the future of human sustainable development. In NHΩA, Alpha to Omega symbolize the beginning and end of the pursuit of perfection on the part of human beings, as well as their efforts to follow the steps of our Creator.

The future development of NHΩA will be a very important investment in the carbon neutralization initiative of TCC. In addition to reducing carbon, the cement industry should also help society and other industries reduce carbon emissions. NHΩA strives to develop energy diversification and its most effective utilization. It is the first olive branch that the dove brought back to Noah's Ark from dry land.

Runaway carbon emissions are the Big Flood of today's generation. Our generation must write the story about how we faced it, and together we will build a new Noah's Ark of redemption for all humankind. We are duty bound to return the Earth intact which was borrowed from the next generation.

Georg W. F. Hegel, the German philosopher, writes, "A Nation is hopeless unless it has people who look up at the stars with lively interest."

There is hope only when there is longing and the obligation of commitment. It is so pressing that we in the cement industry have no time to squander. Thank you.

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### **Host of the Conference:**

Thanks to the Chairperson for the opening speech. Next, let us welcome Mr. John Li, President of TCC.

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### **President Li:**

Chairperson Chang, Chairperson Koo, and all media and investor friends, good afternoon. In the video clip we just watched, it showed that Earth is not a colony of human beings. In the process of pursuing civilization, in fact, we wasted a lot of resources and these resources are way beyond our actual needs. This kind of waste, we show it using the left side of this image. Everyone can see, this ferocious black shade represents the damage done by climate change. It is consuming the beautiful Earth on the right side. This beautiful Earth is actually a giant

battery. The center of this battery has been shown by a microscopic view. The green part is the cathode and the blue part is the conductive materials, and the red part is carbon. Combining it to become a beautiful Earth. On the outside of the Earth, is the letter C, which is the symbol of carbon. C also represents carbon circulation. Without carbon circulation protecting the Earth, life on Earth cannot be continued.

We live in a world of carbon. In the animation, going from the beautiful view of the city, we wanted to show that buildings made with steel and cement provide us a safe shelter. Other things like bridges, roads, airports, seaports and train stations make up a highly convenient transportation network. We ride in cars, airplanes, ships and high-speed rails, these things shortened the distance between people. Various commodities are transported by various types of transportation, across oceans, into the hands of consumers. Everyone might wonder, why there was a part of the video clip that was played backwards. The reason is because in the process of industrialization, we thought we were improving and moving forward but actually we were not improving and we were moving backwards. We've been facing history with our backs to the future. Therefore, under the current challenge of climate change, Chairperson Chang told us, we need to face the future with our backs to history, and this is the only active way to deal with carbon dioxide emissions problems. Everyone can see, the animation showed the view from the outside world into an indoor environment, the notebook, cellphone, air-conditioning, refrigerator, and the mug that the person uses all represent modernization. All of those things have carbon content. Therefore, if we want to enjoy modernization, actually, everyone needs to reduce carbon dioxide emissions together, not just the manufacturing sector. TCC, as an enterprise with high carbon dioxide emissions, we have full obligation to pledge our 2050 carbon neutrality target. To us, it is not a slogan but actionable plans. We cannot say "I won't be in TCC by 2050 anyways, why is this topic related to me?" We need actionable plans. As we are showing these meters, we are officially declaring our blueprint for carbon dioxide emissions reduction. On the top row, there are three meters for our manufacturing segment that show carbon dioxide emissions reduction strategies for the cement-making process. In the middle row, there are two meters for carbon offset. We want to capture and reuse the carbon dioxide emissions. The bottom row with four meters are strategies to reduce carbon dioxide emissions within the transportation and energy sectors. Basically, TCC aims to create electricity from renewables and adopt other strategies to aggressively move toward our zero emissions target.

We have been emphasizing the use of alternative fuel and material in our investors' conference for over three years. Our actual usage including using objects with calcium oxide for alternative fuel. For example, in our Suao Plant, we used reduction slag. In our Yingde Plant, we used basic-oxygen-furnace (BOF) slag. In our Huaihua Plant, we used calcium carbide slag, and in our Guangan, Anshun and Kaili Plants in Guizhou, we used phosphorus slag. We take objects with heat values to use as alternative fuel such as in Guigang Plant, we used waste tires, tree barks and wood chips. In Jurong Plant, we used waste tires and biomass. In Chongqing Plant, we used waste tires and wood chips, and in Suao and Hoping Plants, we used wood chips and SRF. By using alternative material and fuel, we are able to significantly and effectively reduce carbon dioxide emissions. We also use our high temperature during the cement making process to help process other wastes without calcium oxide or heat values. In Guigang Plant, we have 300,000 tons of toxic waste processing capacity. In Jurong Plant, we have 15,000 tons of fly ash processing capacity. In Anshun and Kaili Plants, we help to process household garbage. All these examples show that we help to solve the society's problems of wastes using our cement kiln's high temperature and at the same time, these help to reduce carbon dioxide emissions. However, our ultimate hope is to reduce 50% of our carbon dioxide emissions using our cement-making process.

The next meter has been completed and at the same time, it is the most reliable and effective way to reduce carbon

dioxide emissions, which is equipment enhancements. Our equipment enhancements include preheater, feed bins, flap valve, coal burner, and feeder for raw mill at our Yingde Plant. We also enhanced our ID fan in our Guigang Plant. Other plants such as Xuyong, Chongqing, Guangan and Jinzhou all had equipment enhancements that greatly reduced coal and electricity consumption. On the right side of the slide, everyone can see our Shaoguan Plant. This is the first open factory by TCC in Mainland China. The plant consists of the most advanced carbon dioxide emissions reduction technologies and is the most environmental and smart plant. The ignition began on October 27<sup>th</sup>, 2021 and feeding began on November 3<sup>rd</sup>, 2021. The plant has six-stage cyclone and fourth generation cooler, therefore, the plant can achieve ultra-low heat and coal consumption. The plant also adopts SCR, which means at the same time, the plant should emit the lowest NO<sub>x</sub> in Mainland China, less than 50mg/m<sup>3</sup>. Moreover, the plant can simultaneously process 200 tons of household waste per day. For this open factory, Chairperson Chang hopes to build a warm-water pool and playground and local residents can visit for free. This plant is another indicator of local inclusion. Thus, after the completion of the Shaoguan Plant, in our monthly meeting a few days ago, Chairperson Chang specifically instructed that all cement plants of TCC need to move toward three goals: open factory, local inclusion, and have cultural grounding.

After numerous discussions, we found out that if we can reduce 50% of our carbon dioxide emissions through the cement-making process, it would be a tremendous achievement. But what should we do with the other 50%? This is where carbon capture, utilization and storage (CCUS) plays a key role. TCC's calcium-looping and microalgae sequestration have been seen by many investors who visited our Hoping Plant. However, the scale of these technologies is still far away from commercialization, which requires time and a lot more investments and R&D. Just as what Chairperson Chang said in the video clip, we have resources, if we don't do it, who will? Thus, TCC absolutely promise to invest more resources for the R&D of CCUS.

The next strategy for carbon offset is through afforestation. One single tree can absorb 14-15kg of carbon dioxide per year. If our goal is to reduce 5% of our carbon dioxide emissions, this means we need to reduce 2.5 million tons of carbon dioxide, which will require planting more than 165 million trees. TCC actually had discussions regarding afforestation with many research institutes including the Department of Forestry and Resource Conservation of National Taiwan University. We found out that due to many restrictions and regulations, it is very difficult to conduct afforestation in Taiwan. Therefore, we have contacted the international organization for carbon credentials, Verra, to ask if we plant trees in another region, can the carbon credits be used to offset carbon dioxide emissions in Taiwan and in Mainland China. One of the conclusions of COP26 is to clearly define and explain that in the future, carbon offset and carbon credential will be between countries and become a channel for carbon trading or carbon transferring. Chairperson Chang has a 200,000 acres land in Montana, US, and it is basically the size of three Taipei cities. If we can obtain certification from the international organization to plant trees in another continent to obtain carbon credits that can be used to offset our carbon dioxide emissions in Asia, then this location will be a great place to conduct afforestation and hopefully can reduce 5% of our carbon dioxide emissions.

The next few strategies are answers to the question we have been receiving a lot, which is why we focus on the energy business to reduce the rest of the 32% of carbon dioxide emissions. It is because energy generates about 41% of the global carbon dioxide emissions while transportation generates about 26%. So, to reduce carbon dioxide emissions, you cannot exclude reduction methods in energy generation and transportation. This is why TCC aims to generate electricity using renewables, build energy storage, and even switch our vehicles to electric vehicles. This is how we can reduce one-third of our carbon dioxide emissions. TCC's actionable plans include

turning our coal-fired power plant, Hoping Power, into a coal-biomass power plant, which can help reduce half of its current carbon dioxide emissions. For renewables, our target is to build 5GW by 2050. For energy storage, our target is to build 2.2GWh by 2050. For batteries, our target is to have 3.3GWh of capacity by 2050. Recently, there are some news regarding TCC's investments in renewables, energy storage and batteries, but please know that we are not doing this to be have high news heat. We are doing this because we need to generate power from renewables to reduce our overall carbon dioxide emissions in order for us to achieve our carbon neutrality and corporate sustainability targets.

As Chairperson Chang said, Earth is a giant all-purpose battery, so we want to use solar, wind power, geothermal and ocean thermal to generate electricity. The power generated from renewables can be used by our own operations or be used by large electricity users that pledged to achieve RE100. Energy transformation is central to helping TCC achieve the goal of zero emissions in cement. In 2021, the accumulated total of renewables that are completed or under construction by TCC is around 281MW. Our 2025 target is to have 500MW of renewables under management. Since we acquired stakes in Italy-based energy storage company NHQA, with its many energy storage projects that require solar power installations, TCC does not rule out the possibility to expand our renewables targets and our international market participation.

On November 30<sup>th</sup>, 2021, the A-section of the fishery-solar symbiosis in Yizhu Township, Chiayi, Taiwan will complete grid connection. This is Taiwan's largest fishery-solar symbiosis. As for the geothermal plant in Hongye Valley in Taitung, about a month ago, we all visited the site and saw the location has 120 degrees Celsius of water underground and we are currently planning to build a geothermal well. We hope the plant will be completed on schedule in 2022. This plant is not just a geothermal plant as we hope to operate the hot spring business with the local neighbors. This is a great example of local inclusion. Our first example of local inclusion is DAKA at Hualien. The second is the Hanben Ocean Post at Yilan, and the third is the Shaoguan Open Factory. Thus, the geothermal park in Hongye will be our fourth local inclusion project. We hope for a close cooperation between electricity generation, industrial activities and the local community.

Many investors have been asking us about NHQA. Let me provide a brief update of NHQA. Since our acquisition in July 2021, NHQA announced its 10x plan. The 10x plan includes to have 1.7GWh of accumulated energy storage capacity and to increase the sales volume of EV chargers to 15,000 units per week by 2025 and this is just for the European and American markets alone, the Asian market has yet to be included. At the same time, cooperating with the world's fourth largest car company, Stellantis, NHQA hopes to increase bi-directional EV chargers market share in Southern Europe to 15% by 2030. This means to have 15% of market share in Italy, Spain, Portugal and Southern France. Recently, NHQA obtained a 200MWh of energy storage project in cooperation with the Western Australia state-owned power company, Synergy. This project is scheduled to begin operations on October 18<sup>th</sup>, 2022. Moreover, NHQA set up another subsidiary, Atlante. This is another cooperation with Stellantis and the aim is to focus on obtaining infrastructure projects in various countries in Southern Europe. Chairperson Chang has high expectations for this subsidiary, however, we will have to wait until May of 2022 to provide more details. For now, we can tell you that the focus of this subsidiary is to build power-related infrastructures such as EV charging and energy storage for airports, seaports, and highways. In the 10x plan, NHQA set a revenue target for 2030 to be 15 times of the revenue in 2022. This is a topic that a lot of investors are inquiring and this is the current update.

Currently, the total energy storage projects completed by TCC and NHQA is 300MWh. There are 1.11GWh of



projects that are currently under construction. On the slide, you can see on the right side that the projects include 350MWh in US, 200MWh in Western Australia that I just mentioned, 195MWh in Mainland China for the mines and plants for our own use, and we are still expanding the capacity. In Taiwan, there are 367MWh of ongoing energy storage projects. In COP26, it is obvious that the most important topics are electricity, energy transformation and coal reduction. Thus, as demand for renewables increases, demand for energy storage will also increase. Not many people know that this year, on February 15<sup>th</sup>, at 1pm, 15% of electricity supply in Taiwan was generated by solar. What does this mean? This means when the share of renewables in the energy mix increases, in the afternoon, energy supply will become unstable. Based on the government's target of having 20GW of solar power in the energy mix by 2025, this means when the sun starts to set, in that six hours, Taiwan will be lacking power equivalent to 10 Taichung Coal-Fired Power Plants and three Linkou Coal-Fired Power Plants. So how can we not build energy storage? We call this "eliminating peaks and filling valleys". This means to have renewables generate power and for energy storage to store the power in off-peak hours that can then be used in peak hours. NHQA already has many experiences in constructing and operating energy storage projects around the world, thus, Chairperson Chang has been hoping for the "World Cup of Energy" to commence soon as the acquisition of NHQA has helped TCC to take a big step forward.

If you did not see our UHPC fire-resistant energy storage container outside this venue, please stop by later, Chairperson Chang will explain all the details for you. This is our ultra-high performance concrete (UHPC) energy storage container and it is our secret weapon. Today is the first time to showcase to everyone. The compressive strength of UHPC is three times stronger than the average building, at least above 20,000 psi. The container can withstand more than 1,000 degrees Celsius of temperature and at the same time, inside, we added refractory bricks manufactured by our own subsidiary Kuan-Ho Refractories. Thus, in the future, our energy storage container can withstand extreme weather conditions. Also, if the batteries inside the container become overheated, the heat-resistant feature of our UHPC container is far safer than the traditional metal container. We can also accommodate customer needs to customize the size and shape of the energy storage container. Chairperson Chang also asked the exterior to be designed to look like natural granite or marble and we're working on it. We believe we can achieve that. So other than being used for energy storage containers, UHPC has a wide variety of applications. It will be used in the second phase of DAKA in Hualien and other major constructions. Another important thing about UHPC is that during the manufacturing and curing process, it can store more carbon dioxide than the conventional concrete. So, in a way, it is a low-carbon environmental building material. TCC is in the progress of applying patents and in the future, it will become our competitive strength in the international building material, special material and energy markets.

In the past four years and 10 months, Chairperson Chang had hoped that TCC can achieve diversification and internationalization. Our investment this year in energy transformation in the effort of achieving net zero emissions has been acknowledged and recognized by investors here. We are thankful. On the slide, you can see that the blue line shows the average price-to-earnings of our industry peers which also includes us. The industry peers include companies from Taiwan, Mainland China, Europe, Japan and South Korea. The yellow line, as you can see, has been below the blue line for quite some time until April of 2021, when we announced the acquisition of NHQA's stakes. After that, TCC's P/E ratio showed an obvious increase and way above the average P/E of industry peers. We are very thankful to all investors' acknowledgement of TCC's transformation of our energy business and we will continue to work hard and make NHQA a world-class energy company.

Most investors have given us questions before this investors' conference and most of them are related to the

market of 2022. In fact, Chairperson Chang asked Senior Vice President Huang and I to join a meeting this morning to discuss this matter. Actually, we've discussed this matter for three times now over the past few weeks. We have decided to use three slides to present our views of the market. The first one is about the economy. It is actually a macroeconomic problem. It is not the problem of an individual industry or company. The price increase of materials, resulted in the imbalance of the supply chain which is the result of the lack of resources in transporting goods have caused inflation. This is the biggest concern of the global economy right now. For example, the US is lacking 80,000 truck drivers. The starting salary of a truck driver with no experience is US\$60,000 and the salary for truck drivers with experience is above US\$100,000, but the labor shortage remains. In fact, this morning on Bloomberg news, it showed that the US October CPI was 6.2% and is the highest since the 1990s. On this slide, you can see the yellow line that shows US CPI. In the past, when CPI exceeds 2-2.5%, the Federal Reserves will increase the Federal Funds Target Rate. This happened in 1994, 2004, and 2015. The green line shows the movement of the Federal Funds Target Rate. Right now, the most current number is the October CPI, which was 6.2% and the core CPI was 4.6% with energy price increased by 30%. Inflation like this, we do not dare to call it malignant inflation, but it looks like tapering and interest rate hike are coming soon. Recently, we've been watching the announcements made by the Federal Reserves, the direction is pretty clear for topics such as tapering and rate hike. How will this change the world economy? The funding cost will become more expensive. This means land financing, construction financing and mortgages will become costlier, and of course, it will affect the property market.

The second macroeconomic question is the dual energy control in Mainland China. The origin of this problem is that the electricity price in Mainland China is too low. Therefore, industries that have high energy consumption all moved manufacturing facilities to Mainland China to arbitrage the low electricity price. To become the factory of the world, low water, electricity and labor costs are basic requirements. But, it is precisely because of this low electricity price that made everyone realize the energy structure is problematic. On the one hand, people want to enjoy the low cost of electricity generated by coal, on the other hand, people are cursing coal-fired power plants for emitting large amount of carbon dioxide. Thus, in the future, after COP26, high electricity price and the increase of renewables in the energy mix are unavoidable. Last week I went to a conference and the host asked me a question, it was actually an impractical question. The host asked, "President Li, can you tell us how to obtain cheap electricity generated by renewable energy?" I replied, "There is no such thing, if you want cheap energy, you use coal or nuclear to generate electricity, but if you want clean energy? Sorry, you have to pay a higher electricity fee, because there is no solution that can fit both criteria."

The third macroeconomic question is regarding the recent credit issues faced by large-size property developers in Mainland China and how it will affect the property market. Chairperson Chang actually asked us to do simulations using our forecast models many times but we need to apologize in advance regarding the limited amount of information we can disclose due to the fact that we are currently doing two funding projects, one is in France, our Italy-based France-listed NHQA is currently doing rights issue capital increase and the other is TCC is currently issuing convertible bonds. So, we have to be very careful about the information we disclose because they can only be public information. Based on our public third-quarter results, due to the dual energy control, our production volume did decrease a lot but also because of limitations on production volume, cement price increased significantly. Coal price, as most investors care very much about, at the beginning of November 2021, the Qinhuangdao coal price dropped from RMB2,500 per ton to RMB1,250 per ton. I actually checked the price again this morning. So actually, gross margin in the fourth quarter so far has been returning to normal and actually a bit higher than the average in the past. I want to reiterate the reason why we use three macroeconomic topics to

answer investors' questions regarding the market of 2022 is because inflation, large-size property developers' credit issue and the supply chain are not problems just for TCC, these are problems faced by all industries and trades and they are world economy problems. The uncertainties surrounding these problems are something we should all continue to pay attention to.

Due to the dual energy control, our Mainland China cement market performance showed gross margin temporarily dropped to 19.7% in the third quarter of 2021. But starting in October, the cement price increase was higher than the cost increase and we just announced October 2021 revenues, it actually showed slight growth compared to the revenues of October 2020. But, still, we do not dare to be optimistic as this uncertainty is bound to continue until the three macroeconomic problems have ended.

Everyone can see this index, Mainland China National Cement Price Index, this is public information. Starting in August 2021, cement price began to rebound. In September and October 2021, cement price showed significant increases. The dual energy control can be seen as a beefed-up version of the supply side reform plus off-peak production halts. The price increase offset some negative impacts of the falling production volume and the rising coal cost. Another good news is that our Shaoguan Plant began operations in November 2021 and with new customers and as the plant is located in a mid-high cement price region, our annual capacity can increase by 1.68 million tons. The plant can also help to process 200 tons of household wastes every day, so the plant will provide some positive contributions to 2022's consolidated revenue and profits.

Taiwan's cement market includes cement and RMC. The performance continued to be strong for the first three quarters of 2021. The Taiwan cement market performance has been very helpful in lowering the Group's performance uncertainty.

The next slide is about the performance of Portugal and Turkey. We began these investments in October 2018 and performance has been great for the first three quarters of 2021. In Turkey, the domestic cement price grew by 70% on year. The combined net income of the two countries compared with the same period in 2020 showed 60% growth. This has been very helpful to the Group as a whole. At the same time, in Portugal, our accumulated carbon rights exceed 80 million Euros, which have not been sold. This is another proof that TCC's overseas investments in Europe have beginning to see positive results. Also, this shows Europe's carbon trading system is effective in both reducing carbon and maintain profitability.

For Hoping Power, net income of the first three quarters in 2021 showed a 56% decrease on year. This is due to rising coal cost and also fewer operating days as we continue to strengthen equipment enhancements for environmental protection purposes.

The consolidated net income for the first three quarters of 2021 showed a 19.5% decrease on year and in particular, Hoping Power showed the largest decrease on year, around NT\$2.15 billion. As for cement, although the production volume in Mainland China showed decrease, as we mentioned earlier, we used a lot of alternative fuel to produce cement that made up a bit of the production volume lost due to the reduction of coal usage. During the same period, performance in Turkey, Portugal and Ivory Coast has been positive to the Group's net income. Taiwan cement market continued to perform well. Other subsidiaries also have been performing quite well for the first three quarters of 2021. In the future, we hope our rapid development of the energy business, including renewables, energy storage and batteries, will become a growth driver for the Group.

The four financial ratios continue to remain healthy.

We want to clarify something here. Recently, some media friends like to say TCC is against carbon tax. Actually, that is not true at all. So today, we are using this opportunity to report to everyone our view on carbon tax or carbon fee. TCC completely supports carbon tax or carbon fee but we are against the method of levying a single tax rate on everyone. We believe the first step is to conduct carbon inventory and carbon footprint. I will use an example that Chairperson Chang uses a lot. Two people are competing to lose weight and whoever loses 10kg first wins. But if my competition reported 10kg above the actual weight at the beginning of the competition, then I already lost the competition. So, the important thing is that both parties need to step on to the scale to know the exact weight and that is carbon inventory. If you don't know how much carbon dioxide you are emitting in your industry or your company, without this figure as a base, how do you reduce carbon dioxide emissions? That is the first step, carbon inventory and carbon footprint. The second is that the government needs to provide different carbon allowances or quotas for different industries that are compatible with international standards. In Europe it is called carbon allowance. Take our Portugal operations for example, in 2020 the allowance was three million tons but in 2021 the allowance was reduced to two million tons, a 33% decrease. You can calculate it by multiplying it by the production capacity and then multiplying it by EUR62 (EU ETS price), the company cannot make any profits! In most countries, the cement price is lower than EUR62! This carbon allowance, in other countries it's called carbon quota, has to be compatible with international standards. This should not be set by ourselves. To be compatible with international standards is to help our products to be competitive in the international market. The third step is carbon tax or carbon fee but should not be a single rate for everyone. Companies with lower emissions should pay a lower rate while companies with higher emissions should pay a higher rate to effectively achieve carbon reduction. But the government might be concerned with setting carbon tax brackets because many industrial associations will argue. The solution is simple, there is a system that works right in front of you, called the EU ETS, European Union Emissions Trading System. Just follow what the EU ETS does. It doesn't have to be done tomorrow but a schedule needs to be set up and let the market decide the price of carbon rights. This is an incentivized and punitive system. For companies that cannot afford to pay carbon rights, production should decrease or shut down or conduct equipment enhancements. This is the way to truly reduce carbon dioxide emissions. So, I will reiterate again, TCC is not against carbon tax or fee, we are against levying a single rate on everyone.

The 2050 carbon neutrality roadmap that we have shown in this investors' conference is not a slogan but actionable plans. In our internal meetings, Chairperson Chang has continued to ask employees to change the way we think. We need to think outside the box in order to move forward with reducing carbon dioxide emissions. To us, reducing carbon dioxide emissions is not because of ESG or because we're afraid to pay carbon tax, it is our life and death survival. We have to make changes to grow from the cocoon to become a beautiful butterfly. Using the last part of the video clip to conclude my presentation today. We are no longer in the Age of Navigation, in fact, this time, we do not have a compass or a GPS. We have to go through numerous research and development and trial and error to sail to the new horizon ahead. Thank you.

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**Host of the Conference:**

Thanks to President Li for his presentation.

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## QUESTION AND ANSWER SECTION

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### Host of the Conference:

Slips are submitted on the spot and if participants on the online meeting have any questions, please send your questions to [ir@taiwancement.com](mailto:ir@taiwancement.com). Now, the top management will respond to the questions listed on the tablets.

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### Chairperson Chang:

OK, the questions on the tablet, the first one is from BlackRock regarding business update, coal price impact to cost, cement price in Mainland China...etc, renewable progress and the overseas market, I think we more or less addressed these questions in our presentation but if BlackRock requires more specific information, please contact us.

The next question is from Allianz Global Investors. The question is asking me to share EV market strategy, which business segment is involved, addressable market, a 10-year plan and how much will the EV business contribute to TCC's overall net income. I think everyone here knows that we cannot disclose these numbers or provide net income share targets to the public. Addressable market is pretty clear, it's the global market, not just in Taiwan but the global market. As for the schedule, different business segments have different strategies, take NHQA for example, we completed the deal in August 2021, and then the 10x plan was announced. We're still refining the 10x plan but so far it looks to be on schedule. There is another part of the question regarding contribution to net income, let me explain, on principle, the energy business is profitable but it requires some time to develop. We have several cases in deployment so we cannot disclose details. I apologize for not being able to provide further details at this point.

As for different business segments, the first is our strategy for the EV business, in fact, it is not the EV business, EV to me is electric vehicle and our business is in the energy business. Our energy business includes energy storage, generating energy and allocating energy, in some extent, energy storage is a type of energy allocation. As for questions asked by Cathay Life, President Li actually explained a lot in the presentation as most of the questions on the tablet were provided to us before the investors' conference. Sumitomo's questions are related to carbon pricing and cement plants...etc, HSBC's questions are regarding our capex and our financial statement. We presented our numbers pretty clearly on the presentation. Chinatrust's question mentioned carbon neutrality plan which President Li presented very clearly in the presentation. Another question is regarding the M&A situation in the cement market. In fact, the cement market is always going through M&A, it's not something new. As for Longlead Capital's questions, we just answered all of them and also answered by our presentation, including energy storage, power generation and the impacts. JPMorgan asked about 3Q21 net income showed large decrease on year and our view on profitability for 2022, I think the answer for the 3Q21 net income drop is pretty clear, as for the profitability forecast for 2022, we don't provide those.

From the questions slips submitted by investors within the venue, this slip says Tesla and other companies entered the energy storage market riding on their competitive advantages in the renewables market, what are the strengths and weaknesses of TCC and what are the three-to-five years goals? Actually, the energy market is a brand-new market, everyone is trying to piece together to make it whole. Tesla doesn't have every part of the energy market. I believe we have a certain direction in designing our energy business and we know what we lacked. That is why we went to Europe to find NHQA, NHQA was not brought to us in Taiwan by investment bankers, we went and looked for it. After we found NHQA, we found that NHQA has what we need and we have what they need so we combined forces. We're moving toward a good direction. We are constantly looking for partners. We never believed that TCC or our own energy team has the ability to cover all areas of expertise, so for the areas we are unable to cover, we look for outside partners to solve this problem.

The questions on the slips are very hard to answer in completion in a short period of time because the energy storage business is still developing. One of the questions is regarding how the company thinks the future will become, this is a topic not to be answered in two minutes in a Q&A session. Clearly, there will be development. Another question is a question we already answered regarding the impact of Mainland China's dual energy control and climate change on TCC's operations in the future, I think, clearly, energy control will definitely affect our operations. As for our future business strategy, we announced at the beginning of the investors' conference that we have three core businesses: cement, waste treatment and energy.

Right now, I want to talk about something. Many people here asked about our Mainland China cement production volume decrease or shut down or its return to production. Many investors here think, "I want to see how the company is growing or I want to know how much the cement business grew." We have reported this before, the growth of the cement business means more carbon dioxide emissions. Actually, our mentality, including the investors' mentality, is to understand that growth, the growth of production volume, may not be a good thing. Growth needs to be good growth and should not always focusing on the growth of production volume. The point is to produce the right amount that can accommodate our current society's and economy's development and not just chase after the growth numbers. We need to look at those numbers smartly. Of course, at the Company's standpoint, our goal is to build a cost structure that is competitive to our peers and can also match the macroeconomic condition. That is the target for the TCC management team. We are also hoping to exceed what others are doing in the effort regarding carbon dioxide emissions reduction. We have invested heavily and have announced to the public the roads we're taking. But looking at the questions regarding why our production volume decreased, President Li already talked about this, after a certain period of growth, the cement market will decrease in volume. This is a fact. For investors that have been with this industry for a long period of time know, in Taiwan, the highest cement consumption was around 27 million tons per year, that is one ton above the per capita consumption. Right now, is around 12-13 million tons per year and the market is quite stable and we have a reasonable margin. Our current carbon dioxide emissions are probably less than one-third or maybe less, per ton base, of the emissions compared to when the total Taiwan cement market consumption was 27 million tons. I don't have the detail numbers. This is also the condition in Portugal. Portugal's total cement consumption was 12-13 million tons per year before but right now it is less than four million tons per year, but it is still a reasonable market, an evolving market, paying close to EUR60 of carbon tax. Thus, I hope everyone's analysis can look beyond the number itself, just like when you're analyzing carbon tax, don't just look at the tax rate itself but need to look at the content and look at the formula, which is key. So, after I talk about this, many questions are not necessary. Our numbers are not as good as last year's but they are OK.



Another question says that TCC has been improving on many fronts but the only part that is not improving is the board structure. It is a fact that our independent director ratio is lower than the world trend. Honestly, in Taiwan, the ratio of independent directors is low in general. Take our subsidiary in Europe, NHQA, for example, independent directors account for more than half of the board seats. I think this requires time to make changes because there are still shareholding problems during voting. When someone has a block shareholding, someone will ask for a position and this is not something the chairperson can control, it's the market type and the mentality of the stock shareholders. On this question slip it also mentions that cement is still a large part of TCC and the answer is yes, this will also require time to change. The same slip added that the power plant is highly affected by coal price and facing an unfriendly environment, will TCC's dividend payout ratio change and what is different from the past? I think the market has changed significantly and we are doing our best to obtain a reasonable return for all investors. It is impossible not to change. For the Hoping Power Plant, we're planning to make changes but some things cannot be disclosed at this point. As for the promise of profitability to investors, let me ask the person who asked this question, what is your promise to your clients? We cannot make promises, we can only say we're trying our best with all of our resources and efforts and the market can judge if what we're doing is right or wrong. I cannot provide our investors an absolute promise. If I do that now, the Taiwan SFB will lock me up for affecting the stock price. OK, so far, we have answered all the questions.

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**Investor:**

The dividend payout.

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**Chairperson Chang:**

The dividend policy question can wait until springtime. We have to close our book for this year to know the net income and what kind of investments I have to make for the next year, after that, we can disclose dividend payouts. We are not the same company as before because the capex for the future is bigger. Therefore, if we have any plans, we will definitely announce it. The dividend will depend on how much money we made, what kind of investments we're going to make, what are my funding needs and at the same time, the liquidity of the capital market, and then we can decide. But this is definitely not something I can talk about right now. President Li mentioned in the presentation that in the future, inflation seems to be high, therefore, interest rates are likely to be high, so the whole capital market might see a significant change and that change will definitely determine our future plans. To discuss dividend payout at this point of time is a bit early, I think. Thank you.

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**Host of the Conference:**

This concludes our Q&A session. We now invite Chairperson Chang to make remarks for conclusion.

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**Chairperson Chang:**

The host asked me to make conclusion remarks and I wonder why investors' conferences need conclusion remarks, but that's not a problem. I think I actually said quite a bit in the Q&A session. The matter of fact is that I hope our investors can look beyond numbers. I hope investors can look at the whole consumption habit change from 2020 to 2050 and not just look for how much growth is going to happen in 2022 and always focus on the growth questions. Whether the questions are focused on growth of the production capacity or making money, I'm not saying making money is not important, it is important, and I also understand that everyone needs a reasonable return but it is crucial to see that the fundamental market is going to change. One of the ways for the cement industry to achieve zero emissions or reducing carbon dioxide emissions is to reduce production volume. For example, if we can produce concrete with the same strength, one of the ways to reduce carbon dioxide emissions is to reduce the amount of cement content. When the amount of cement content reduces, the overall cement demand falls. For example, Mainland China's policies to reduce coal consumption, energy consumption and carbon dioxide emissions will also reduce the overall consumer consumption and this may not be a bad thing. Like what I said in the video clip, in the future, the consumption pattern will have to change somehow and not just keep on moving forward with consumption-driven economic activities. As for the manufacturing sector like us, it is very clear that carbon dioxide emissions reduction is our responsibility and we have to keep this going. I think President Li has been asked this question many times on how we can achieve our target of carbon neutrality by 2050. For this goal, we're not just saying it, in fact, we have ongoing projects for all the parts we mentioned, and we present numbers, not just phrases. We are reducing emissions every year. As for how exactly are we going to achieve carbon neutrality in 2050, with the current technology, I can tell you, it is not possible. But I hope investors can give us a few more years, we will have more certainty. The most important point is, and I have mentioned this in my opening speech, everyone here today, we're all sinners. Think about this, each one of us emit on average 13-15 tons of carbon dioxide each year, please think about how you can reduce carbon dioxide emissions and are you willing to pay high prices to reduce carbon dioxide emissions? If everyone wants a horse to run without having to eat any grass, then I think carbon neutrality for 2050 for the whole world is not achievable. This is something that requires attention and efforts from everyone, not just industries, but also consumption habits and business models. Of course, the manufacturing sector will put in all efforts. At least TCC is moving toward this goal with full force. I thank everyone for coming today and hope we can have a direct dialogue and together we can move toward the goal of carbon neutrality and provide our children and their children a complete and safe Earth to live on. Thank you.

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**Host of the Conference:**

This concludes our investors' conference. Thank you again for participating on-site and online. I wish you all good health and success in investments. Thank you.

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