

# PROFILE

LS GREENLINK

# CLEARING THE WAY FOR MAKING CABLE

When constructed, LS GreenLink's Chesapeake facility's VCV tower will be about 660 feet high. It will be the tallest building in Virginia. (Courtesy: LS GreenLink)



# *When LS GreenLink's new HVDC undersea cable manufacturing plant in Chesapeake, Virginia, goes online in 2027, it is expected to be a boon to U.S. offshore wind's development as well as a producer of American jobs.*

By **KENNETH CARTER** ▶ Wind Systems editor

**T**o move the energy being generated by an offshore wind farm to the mainland, miles and miles of cable are needed to connect those spinning turbines to an onshore transmission grid.

It's easy to overlook the important function of these undersea cables since the ocean waves hide them from view.

But essential they are — and as U.S. offshore wind continues to grow, it has become even more essential that these cables be manufactured efficiently and in locations near where they will be needed.

That local presence is closer to reality as LS GreenLink recently announced the building of a new facility in Chesapeake, Virginia, that will produce high-voltage DC cables (HVDC) for the U.S. offshore wind industry, according to LS GreenLink Managing Director Patrick Y. Shim.

## **DECADES OF EXPERIENCE**

LS GreenLink is going to be purely based in its operation in Virginia; however, the company's umbrella company has been manufacturing cables since the 1960s.

"Although LS GreenLink is a new entity that we set up for the new operation in Chesapeake, Virginia, its parent company, LS Cable & System LTD, is a global cable manufacturer based out of South Korea," Shim said. "It's one of the largest cable manufacturers in the world, so we're a highly established company. We are one of the top major cable manufacturers, both for energy and communications cables. We have a presence globally, and we've been doing business in the U.S. for many decades already."

When deciding on where to build the site, the company had narrowed it down to two locations along the East Coast, according to Shim.

"We spent about two years looking at a number of sites throughout the East Coast, and the last two sites we identified to be suitable for us were in the southern Virginia area and the Hampton Norfolk area — one being Chesapeake, where we decided to go," he said. "The only reason why we decided not to go to Norfolk was because the Norfolk side was a 30-year lease site, whereas Chesapeake is a site that we could buy and control. It's not that Norfolk wasn't as good as the others, it was a choice between wanting to own it vs. leasing it."

## **BREAKING GROUND IN 2025**

Currently, LS Greenlink has the 100-acre site under contract and it is going through the permitting process from the city level to the state level up to the federal level. Once that is finished, Shim said the company plans to break ground the first quarter of 2025.

"In fact, we are hoping to break ground around the same time as the IPF event that's happening in Virginia Beach, so

we're shooting for around that timeframe," he said. "Our goal is to be up and running by third quarter of 2027."

Cable manufacturing factories like the one being built by LS GreenLink are unique in that they have to be very tall, according to Shim.

"We need to have a very tall structure — what we call a VCV tower," he said. "Our tower is going to be about 660 feet high. It will be the tallest building in Virginia — and not only the Commonwealth of Virginia, but between Philadelphia and Charlotte. This will be, by far, one of the tallest structures being built in the region."

## **USING GRAVITY IN MANUFACTURING**

That height is needed for the manufacturing of the cables, according to Shim.

"We need to center the core of the cable, and what we use the height for is for the gravity," he said. "It is one big gravity machine, basically. We feed everything from the top and use gravity to center the core of the cable, and that's part of our manufacturing process."

These cables can be tens of miles long and are produced in one, continuous piece. As the cables are manufactured, Shim said, they are spooled onto massive carousels or turntables — like a cassette tape — positioned near a pier. Once there, the cables can be re-spooled from carousel to carousel onto waiting vessels that will transport them to the wind farm for installation.

"We're going to actually have a significant pier coming up pretty far because our vessels also can be 600-feet-plus-long vessels," he said. "There's a gangway that connects the carousel to the vessels. Everything that we use to manufacture cables come in by truck. Everything leaves by vessels, because once we have these tens-of-miles-long cables, we cannot transport them out using rail or truck because they're so big. The volume's so large. Everything goes directly onto the cable-length vessel, and from there, it goes to the project site."

## **COMPANY ROOTS**

LS as a company, although not a household name, was spun from electronics manufacturer LG. LS split from LG about 20 years ago, according to Shim.

"From our days being part of LG, we're a very innovative company, and it's all about quality and excellence of our technology," he said. "We make sure our products are by far one of the best out there. We don't put our name on products that we don't believe in having our name on. I think, pretty much, not just LS products, but all the LG affiliate companies that used to be part of LG are all about the quality of the product. We continue to make significant investments on R&D, and not just on innovation, but also on whatever we sell that we'd be proud to have our name on."



The cables that will be manufactured can be tens of miles long and are produced in one, continuous piece. As the cables are manufactured, they are spooled onto massive carousels or turntables — like a cassette tape — positioned near a pier. (Courtesy: LS GreenLink)

To that end, Shim re-emphasized LS GreenLink is not a company that's starting from scratch.

“Our cable business, LS Cable & System, has been around since the '60s, so we are not a startup, but over the years, we've been making significant money investments into the offshore wind industry,” he said. “In fact, we've been one of the leaders in the offshore-related power cable industry for a long time. We've been a supplier to many of the offshore wind projects in the U.S., so we've been around. We decided to set up LS GreenLink because we're a new entity, given that that will be manufacturing in the U.S., so it is an extension of an existing business.”

LS Cable & System has been involved in multiple offshore wind projects worldwide for decades, according to Shim.

“We've been very active in the U.S. and Europe and also Asia as well — We are one of the top three firms in the world,” he said. “We're very much involved in pretty much every major offshore wind project. As you know, a lot of these subsea cables are not just used for offshore wind. They can be used for any kind of underwater power transmission. There are a lot of interconnection projects out there, so we're very active globally. Most of our manufacturing is being done in South Korea, but with this project announced recently in the U.S., we continue to grow globally.”

Part of the investment in making LS GreenLink's cable factory a reality was being able to take advantage of the recent Inflation Reduction Act's 40 HC program, according to Shim. With that in place, LS Cable was awarded a \$99 million tax credit. “I believe we're one of the largest recipients of the award, so we are receiving \$99 million worth of investment tax credit,” he said. “It's not free money; it's based on performance. We also are finalizing our state and local incentive



A sample of the HVDC cable that will be manufactured in Chesapeake initially. (Courtesy: LS GreenLink)

package, which is another \$50 million, which are, again, all performance based. There's about \$150 million worth of federal-, state-, and local-level incentives coming. Our project cost is expected to be over \$680 million, so there's a significant investment for us.”

## FACTORY IS A U.S. PROJECT

That being said, Shim pointed out that, although the company is from South Korea, the facility will be a U.S. project.

“Although we are a company in South Korea, only two things are coming from Korea: One is capital, and the second is the technology,” he said. “All our employees will be Americans locally in the U.S.; our raw materials come from the U.S. All our products will be made by Americans in America using American products. So, this is something that — although we are a foreign company — is really an American project.”

One of the most impressive aspects of the new cable manufacturing facility is that, even though it’s three years out from producing its first cable, Shim said they are currently approaching potential customers. “The backlog of the supply chain is pretty significant, so we are already talking to our customers,” he said. “They’re looking for cables years out. We’re already talking to customers about things that will be manufacturing in years ahead. We are pretty confident that this factory will be very successful from Day 1. We’re planning to be up and running by third quarter of 2027. That’s a relatively short time from today, so we’re looking to have the customer base already in place, and we are doing very well on that already.”

### PLANS FOR EXPANSION

Even though the factory hasn’t even broken ground yet, Shim said they are already thinking ahead about expansion plans.

“We want to continue to build and grow the operation,” he said. “The site that we have under contract is 100 acres, and we’re only using about half of it right now. We have a lot of expansion opportunities around that. There are a lot of things that we want to do with the rest of the site. And the industry, as you know, is growing pretty rapidly. Although there are some hiccups here and there, if you look at the industry globally overall, there’s significant growth. We hope to grow with the industry and also be able to service our customers quickly as possible with quality products.”

Those expansion plans are just part of the confidence LS GreenLink has in the U.S. offshore industry, despite a few challenges the sector has faced in the last few years, according to Shim. “Companies like us are not concerned about the next year or the next two or three to four years; we always look decades ahead,” he said. “Whatever happens in the next year or two, yes, it does concern us sometimes, but we’re really, really in it for the long run. In the U.S., we’ve seen other stakeholders in the industry that came and left or postponed their projects. This cable-manufacturing facility we’re building, we’re coming in for the long run. That’s why we wanted to purchase a site and control it, and we have expansion plans, because we’re more concerned about the next hundred years rather than the next 10.”

**MORE INFO** [www.lscns.co.kr/en/main.asp](http://www.lscns.co.kr/en/main.asp)

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