October 15, 2020, promises to be an important day at Port Canaveral, when Carnival Cruise Line’s Mardi Gras will be the first cruise ship to bunker LNG in a North American port.

The refueling will take place from an integrated tug and barge bunker vessel, holding an estimated 4,000 cubic meters of LNG, and is expected to take five to six hours, a time-span comparable to traditional fuel oil bunkering, according to Captain John Murray, CEO and port director.

Parallel with the LNG preparation, the port is building a new pier and terminal for Carnival with the first stand-up wall being erected as port executives were speaking to Cruise Industry News in May.

**New Dynamics**

“With the IMO introducing stricter emissions regulations starting in 2020, we realized some time ago that everybody would have to adapt to the new dynamics,” said Murray. “We started work to position Port Canaveral so when the first LNG cruise ship is delivered, we will be ready to receive it.

“We have done considerable work, determining where the natural gas supply is in Florida and how to get it here. We have worked with the regulatory bodies involved, and we are confident we will be ready when the Mardi Gras arrives.

“We have conducted hazard exercises,” Murray continued, “and we have reached out to all the people who might be involved or affected.

“It has been a long road. We are the second largest cruise port in the world in terms of passenger throughput and wanted to be out front and ready when the LNG ships arrive.”

**Coast Guard Oversight**

With oversight by the U.S. Coast Guard, one advantage Port Canaveral has is that the Coast Guard has already been working with LNG bunkering of cargo vessels in nearby Jacksonville.

“As we fall under the jurisdiction of Jacksonville, that gave us a head start working with the Coast Guard,” added Barry Compagnoni, senior director, public safety and security for the port.

“Shell, which will be the provider of LNG to Carnival, and the transporter (Q-LNG), started working with the Coast Guard several years ago to design the barge that will be bunkering the Mardi Gras, making sure it will meet all the international code requirements for carrying LNG.”

The integrated tug barge is under construction and will be delivered in the first quarter of 2020, according to Murray,
who also said that Shell will bring the LNG down from Elba Island in Georgia, fuel the Mardi Gras and then go back for more.

The bunkering will be done on the water side of the Mardi Gras while the ship is being turned around, disembarking and embarking passengers and loading provisions.

“The bunkering process and procedure have been addressed and approved by the Coast Guard,” Compagnoni added.

As for a safety zone, he said that will be determined by Carnival and the Coast Guard within the security zone that all cruise ships have, and areas near hose connections will be off limits.

Hazard Identification

Preparing for LNG fueling also included hazard identification assessment workshops hosted by Shell and facilitated by the American Bureau of Shipping, focusing on potential hazards involving the ship, the barge and the port.

Murray said the port had worked through a process of identifying potential hazards from the barge entering the port to navigational, environmental and operational hazards, involving multiple stakeholders such as the Coast Guard, the fire department, the pilot association, the cruise line and barge operator.

“‘It has been a long road. We are the second largest cruise port in the world in terms of passenger throughput and wanted to be out front and ready when the LNG ships arrive.’”

“We looked at all the potential hazards and consequences and then focused on the implementation of mitigating measures that would address any of the potential threats,” he said.

Training

Compagnoni said the port also started to funnel more funds to its fire department two years ago enabling firefighters to take part in LNG training at different fire academies.

“We wanted to make sure that our fire department is well prepared. Any mariner or crew that will be operating will be required to comply with the STCW requirements for serving on a vessel with low flash point fuel,” he said.

“Our own fire academy has also added a component focused on LNG firefighting.”

In addition to marine firefighting, the academy now also offers LNG awareness and firefighting courses for responders, maritime personnel and officers.

Outreach

Another effort has focused on community outreach whereby port and fire department representatives have informed surrounding communities and civic organizations, as well as port stakeholders and employees, about the LNG operation.

Said Murray: “It has been very productive; we have gotten a great response from the local community. What we are trying to do is to make sure people are well informed.”

While Carnival is deploying its first LNG-fueled ship out of Port Canaveral, Disney Cruise Line is also building three LNG ships and has traditionally based its new ships in the Florida port.

In addition to Shell being the fuel provider for Carnival, Pivotal LNG is fueling cargo ships for Tote Maritime in Jacksonville via barge and recently opened a production facility there positioned to serve customers in the southeastern United States.

Moreover, the space industry plans to use LNG as fuel for rocket engines for launchings from the Kennedy Space Center at Cape Canaveral. – Oivind Mathisen