

NNSY ESPC Combined Heat and Power Plant Project

Virtual Public Information Session

Questions and Answers | 21 May 2020

- Q1)** Doesn't the existing Wheelabrator facility allow you to "Island" the shipyard now?
- A1)** Right now the Wheelabrator facility does not allow us to efficiently or automatically Island the shipyard and that's what we will be able to do with this new project. We will have efficient and automatic ability to Island the shipyard in the event of a grid loss.
- Q2)** How do your emissions reduce when you begin to burn fossil fuel instead of trash?
- A2)** As I tried to explain in the efficiency slides, the fact that we are co-generating and using one source of fuel for both sources, producing both sources of energy, steam and electricity. It is eliminating greenhouse gasses from those power plants that are in the neighborhood of 30% efficient, hundreds of miles away. The EPA publishes a data base called E-Grid that has the emissions profiles of different sectors of the country and you can use that to determine the offsets if you are building a plant in a particular area of the country and what the typical emissions profile is. This project will reduce greenhouse gas emissions.
- Q3)** Where will the cars go that are being displaced from the parking lot?
- A3)** There will be some parking that will be impacted by the construction of this CHP plant those vehicles will be displaced over to parking areas we have at South Gate Annex, which is on the other side of the Jordan Bridge from Lot 41.
- Q4)** Was your original intent just to build a power plant and then you decided to do CHP?
Can you build the other facilities without the CHP?
- A4)** The original intent of this project was a base-wide, full blown, fence-to-fence, ESPC evaluation. We looked at industrial processes, we looked at building facilities, we looked at everything. That was our assignment going in. We did not go in thinking that we were just going to build a power plant. The original intent was a comprehensive energy savings performance contract. In fact, one of the original charges of Ameresco was to evaluate industrial processes. How could we help the shipyard become more efficient in their processes. We went through a long evaluation process back and forth with the Navy and the project actually got delayed for many months while a congressional

program called the SIOP, Shipyard Industrial Optimization Program, was balanced against not just this ESPC at this shipyard, but also a sister shipyard in Portsmouth, New Hampshire. We looked at everything and eventually through a series of conflict resolution and making sure we weren't going to be doing things that might be changed when the SIOP happens. The project got narrowed down to the four remaining ECMs. The other thing we did was, we looked at how could we, not just build a power plant, but how could we incorporate the Wheelabrator ongoing steam provisions into this ESPC. So, we looked at a variety of options, we even considered and evaluated if we could even buy more steam and run it through a steam turbine to create electricity. Ultimately, we couldn't get that to pencil out economically, and also because the concept of the Three Pillars of Energy Security where the shipyard wanted to have their own source, their own controlled source of energy and being able to produce it on site. So all those factored in, and the other main factor by providing energy savings, the CHP plant could fund all these other improvements. The Industrial Waste Water Treatment Plant is critical to the success of this overall project. That was one of the lynch pins of getting this project through because it's so important.

I'll just add that, as indicated, we started looking across the entire shipyard and during this process. The Navy's requirement for Installations to look at establishing energy resiliency and redundancy came into play and that's where we shifted into adding the CHP as a later add on to the ECMs going through this. We actually had 14 different measures that we looked at and each one was analyzed from a payback stand point and a period of payback, and that's how we ended up with the four ECMs.

- Q5)** How do you envision going forward after the 22-year contract term expires?
- A5)** During this 22-year period the Combined Heat Power plant will be maintained and operated by the contractor, Ameresco. At the end of that 22-year term government employees will then take over management and operations of the plant.
- Q6)** If this was not an ESPC project would you have had to come to the public with a more formal hearing and outreach earlier? Congress obviously, is obviously not involved in this because there is no financial outlay, so ESPC seems to allow the military to do this without telling anyone.
- A6)** The project had a very rigorous review at the outset, as well as through the various stages of execution. We also, through our Environmental Assessment, had to make public notifications of the project, so all very consistent – the same public outreach efforts that would have had to go into a project that did not have third party funding.

I'd like to add a few points to that. As (stated previously) we went through a very rigorous evaluation process. As part of the ESPC process it has to go to Congress. Because this is a larger project it had to go for two congressional notifications, a 15-day and a 30-day went all the way to congress, the Pentagon was involved at very high levels in the review and approval, so it has been vetted.

Q7) How many times over the past 10 years has ship repair work been delayed by problems with the RDF plant?

A7) I don't have the data in front of me for the past 10 years, so I'll have to get back to you on that. However, I can tell you in the last four month timeframe we've experienced three instances where we've had impacts to shipyard production efforts as a result of problems or issues with Refuse-derived Fuel Plant (RDF).

Q8) There will be fewer employees at the CHP plant then there are today at the RDF plant. How is that a "benefit" to the community?

A8) I'll answer it this way, Right now we do not perceive that the RDF plant cannot continue operations when we bring the CHP plant online. The RDF plant could still burn refuse and generate electricity and put that into the Dominion (Energy) Power grid while our CHP plant is in operation, so in summary, I see them operating at the same time.

Q9) Will there be a percent of minority businesses/contractors that would be included in the process?

A9) There is and I don't know the percentage off the top of my head, but whenever we do these projects we work closely with the Navy and the government on a small business subcontracting plan and work to include as many local and small business' as possible. We can circle back with whoever asked that question.

Q10) When will construction activities start?

A10) For the IWTP and the steam repairs, as well as the transformer replacement, those we should see starting construction later this summer. We are in the process right now of setting up construction site trailers and going through final designs. For the CHP plant, I don't have a good date for the start of construction yet, we still have to go through Air Permitting process and finalize the design on that before that can start.

- Q11)** Will the building be elevated to account for current and future sea level rise and storm surge? Also how does this project fit into future plans for shipyard improvements planned at the four shipyards?
- A11)** The first part of the question, we are building this CHP plant to our 500 year flood zone, so it would be elevated and out of what we see as the known flood issues in the area. The other question is related to the shipyard improvement plans that the Navy has for all four shipyards. The aspects of this, ESPC has been reviewed by the appropriate authorities in the SIOF and has been approved and will be folded into those future improvements, so this will be, in many aspects, this will be a base for us to build from because of the CHP plant as well as the micro-grid technology that it will incorporate.
- Q12)** Are you aware that the sale of steam to NNSY, which has been ongoing for decades, is a central feature of the waste disposal system in the region of eight communities? Was that taken into consideration?
- A12)** Yes we are aware of how that played into the history of Wheelabrator, or with the communities and the decision was made in concert with the Navy that the benefits of producing their own power met those energy security pillars as well as the other ancillary benefits. Being able to leverage energy saving through the ESPC allowed them to build out their infrastructure at no additional tax payer expense, and I don't want to speak for the Navy, but those are some of the reasons why the CHP was pursued.
- Q13)** On the "Islanding" answer, what does "automatic" and "efficient" mean? How long would it take the existing Waste-To-Energy (WTE) facility to solely feed the shipyard if the grid were disrupted?
- A13)** So there are two questions there. I'm not an Electrical Engineer, so I will have to defer the length of time it would take to do that, but the second part of the question really relates to the legality of an independent power producing (IPP) producer providing electricity to the shipyard. Virginia is a regulated utility state, so IPPs cannot (by law) sell power to anyone but the grid. They can't sell to private industries or other customers, so that presents its own challenges, regardless of the technical challenges of the electrical relays and equipment necessary.

Amended: This question is specific to Wheelabrator's electrical configuration and should be directed to Wheelabrator.

Q14) Will the Navy waste disposal contract still be required to be delivered to the WTE plant?

A14) Let me start with the Navy is not the only entity that sends trash to SPSA to be burned at the refuse derived fuel plant. Our intent is to continue sending the Navy's trash to that plant as long as it is in operation.

Q15) Does the existing WTE plant generate sufficient electrical power to meet 100% of the shipyards needs?

A15) Well again, it can't sell to the Navy or provide power over there as I discussed in my previous answer (A13). I don't know, off the top of my head I don't recall the configuration over there at WTE; how many, the size of their generators, but again the legality question poses a big issue.

Amended: This question is specific to Wheelabrator's electrical configuration and should be directed to Wheelabrator.

Q16) If Ameresco was aware that the sale of steam was so central to the waste disposal system in the region, was there any discussion conducted with SPSA as to whether the CHP construction could be delayed to meet the 2027 contract termination with Wheelabrator? What is the rush to build the CHP now?

A16) There are a few things; the contract under which we were building this ESPC expired on December 16th, so we had to get the contract signed before December 16, 2019, which we did, that was a hard deadline. Also, the contract between the Navy and Wheelabrator for steam sales expires in the beginning of 2023, so at that time, that's when the CHP would be put into service and the Navy could start realizing the savings that are essential, again, to providing the IWTP. Everything works together and the Navy needed to secure those savings to fund the other infrastructure at the site. There were some hard deadlines, the 40 year old plant was not going to last seven more years and it had to get done.

Q17) Will the answers to the questions you are unable to answer in this forum be shared with all attendees?

A17) Yes

Q18) Is the new CHP plant in compliance with Virginia's new Clean Economy Act that requires power generation to be carbon free by 2045?

A18) The carbon-free power generation requirement of the Clean Economy Act applies to Dominion Energy and Appalachian Power. From the Virginia Governor's website: "The Act requires Dominion Energy Virginia to be 100 percent carbon-free by 2045 and Appalachian Power to be 100 percent carbon-free by 2050. It requires nearly all coal-fired plants to close by the end of 2024."

Link to gov website: <https://www.governor.virginia.gov/newsroom/all-releases/2020/april/headline-856056-en.html>

The Navy has a need for steam and resiliency. Solar power (as one example of carbon-free energy) does not provide consistent steam, or a 15-day backup. The CHP solution with all the emissions controls is the cleanest solution that can be developed in a reasonable footprint to meet all the Navy's needs with present technology

Q19) Will the CHP presentation be available via email or download?

A19) Yes

Q20) How will the reduction in parking in this lot due to CHP be managed? With additional crew/contractors with the arrival of a second carrier?

A20) See Answer #3.