

## IR power plant to become one of nation's cleanest

By Monica Scott  
Staff Reporter

Do economic development and good jobs in the energy sector have to come at a cost of environmental degradation? Not in Delaware, said Gov. Jack Markell on Tuesday, along with cabinet members Alan Levin of the Economic Development Office and Collin O'Mara of the Department of Natural Resources and Environmental Control.

The three men joined Drew Murphy, president of NRG Northeast Region, and Jack Grant, plant manager at the Indian River Generating Station near Dagsboro, on Nov. 30 to announce NRG's \$360 million air-quality improvement project on what will be its final operational generating unit, which will come with hefty air-emission reductions.

Markell emphasized that the \$190 million in low-interest bond financing that NRG will receive for the project is not state taxpayer money – rather it will come in the form of bonds through the federal government. Levin explained that the state operates as a “conduit” for the funds and, in doing so, actually will make about \$950,000 in revenue because they charge a fee to do so.

The project is a big accomplishment for the state economic development office, Markell said. “We have never done a project this big. It is the single biggest one we have ever done.”

He also said it is fitting that it should happen at NRG, because “there has been so much focus on the environmental issues in this part of the state for a long time. ... This is exactly what we should be doing.”

“What took you guys so long?” Levin added to officials at NRG, which has been the owner and operator of the plant for about a decade. He also gave accolades to O'Mara for his vision and for his belief that things could be improved.

“We are in Sussex County. It's not raining. We are putting people to work, and we are helping the environment. It's a huge win,” said Levin. “This is just the beginning for this facility.”

O'Mara added that it was an exciting day. “The inland bays are one of our treasures,” he said, adding that NRG's leadership is “absolutely incredible” and will help to catapult NRG into one of the “cleanest coal plants in the country.”

“To be in operation by December of 2011, a \$360 million investment and several hundred jobs – this will demonstrate to the country that you can make coal cleaner.”

DNREC – and O'Mara since he signed on as Secretary in 2008 – had been in negotiations with NRG over environmental issues for some time.

Under a consent decree announced earlier this year, NRG had already agreed to shut down its two oldest units at the power plant, in 2010 and 2011, respectively, and was to install air pollution controls on the newer Units 3 and 4 by the end of 2011, to reduce emissions of nitrogen oxides, sulfur dioxide and mercury. In May, NRG discontinued operation of Unit 2.

In May 2011, the company will shut down Unit 1 and, by the end of that year, NRG will complete installation of pollution controls on its largest unit, Unit 4 – the project the governor and company applauded this week.

As part of the finalized shutdown agreement, NRG will now operate Unit 3 in compliance with all existing state and federal emissions regulations only through 2013, rather than operating for decades with some additional pollution controls.

That agreement, and the technology to be constructed for Unit 4 – which will be the sole unit operating at the generating station after 2013 – is expected to result in massive reductions in air emissions and water use.

Those numbers include – over and above what the 2007 agreement would have achieved (over an expected life of at least 30 years):

- An 86 percent reduction in water use by eliminating 59.13 billion gallons of cooling water drawn annually from Indian River;
- An 81 percent reduction of nitrogen oxide by eliminating about 1,173 tons annually;
- A 49 percent reduction of sulfur dioxide, by eliminating 6,252 tons annually;



- A 93 percent reduction of the greenhouse gas carbon dioxide by eliminating 837,000 tons annually;
- A 97 percent reduction in landfill materials, including eliminating 40,000 to 70,000 tons of fly-ash production annually;
- A 93 percent reduction of mercury emissions by eliminating 5 pounds annually; and
- A 93 percent reduction of particulate matter emissions.

The technology of the current \$360 million project, which is employing several hundred union construction workers, Grant said, is “phenomenal.”

“It’s as big as the power plant, and it will take 2.5 percent of station power to power the back end of it.”

He said the new technology will allow “quite a reduction” of the acid rain components nitrous oxide and sulfur dioxide. Exhaust will go through a device similar to that of a catalytic converter in a car, explained Grant, (called a selective catalytic reduction unit or SCR) and will then go through scrubber units powdered in lime.

While ash will still be landfilled at the lined Phase 2 landfill on NRG property, the air emissions and particulates are expected to be lessened considerably. Grant added that mobile particulate monitors, as well as some fixed ones, will be getting installed to better gauge air emissions throughout the county.

O’Mara said the investments made by NRG show that a sound economy and a healthy environment can co-exist. “We really can have both,” he said, rather than one at the expense of the other. He said NRG’s decision to invest in the technology to lessen air pollution is something to be emulated.

“We’d achieve our air quality goals in a few years – not decades – if all companies would make investments like they [NRG] did.”

Peter Mandelstam – founder of the wind-power company Bluewater Wind who stayed on when NRG acquired that company in November 2009 and who now acts as NRG’s head of offshore wind-development offers – said that [NRG President and CEO] David Crane “fulfilled a promise today... of ‘moving clean energy forward.’ We are very proud.”

Mandelstam said they hope that streamlining of federal permit processes for offshore wind-energy projects – announced just last week – will save two to three years in making the planned Bluewater Wind project off the Delaware coast a reality.

When that happens, it could provide clean-energy jobs for those already working at the plant and for new employees who will be able to be trained in a wind-turbine technician program at Delaware Technical and Community College – that program being another part of the consent order.

Mandelstam said they are also working hard to make sure that other projects are in the pipeline, so that manufacturing vendors will want to set up shop in Delaware to sustain the market, as well as bring permanent jobs to the area. (NRG negotiating with offshore wind manufacturers was also part of the consent decree with DNREC.)

“When you have stable, predictable series of projects, these companies can then make these investments,” he said, adding that, because of the size of offshore wind turbine parts, it only makes sense to have the manufacturing near the installation.

Citing the size of many of the turbine parts, Mandelstam said, “700 tons can’t fit on a U.S. road.” He said they would have to be transported by water instead, and an efficient way to do so would be to make Delaware a “regional hub” for manufacturing – which could, in turn, bring thousands of permanent jobs to the state.

Murphy cautioned that one project like BlueWater Wind’s planned wind farm off the shore of Rehoboth Beach will not result in economic development or many jobs with short-term energy policies. “There has to be projects in Maryland, Virginia, Rhode Island, Maine, so people know there are projects lined up.”

Mandelstam, too, urged that such projects be encouraged. “This country, frankly, has lacked an energy policy. We need a consistent regular policy, so businesses have certainty.”

Murphy applauded members of the state legislature, county officials and dignitaries who had made the day possible, saying the announcement of the project and its funding represents “how government and private industry work together to get results.” He also thanked the union workers on the project, “who are doing the real work.”

“Anytime we can see hundreds of Delawareans working, it’s a great day,” added Markell. “It’s win-win.”