The Missing Piece

Ever since Thomas Edison first invented the light bulb in West Orange, New Jersey, the search has been on for an effective method to store electricity. This search has intensified as more renewable energy sources – mainly wind and solar – have been added to the grid.

Both of these sources are intermittent. In addition, wind is adding electricity at night, when the wind is strong but electric use is low. Energy storage is the missing piece of the puzzle for a green, affordable and reliable electric grid for the 21st century. Storing energy will be critical to making the electric system efficient, adding more renewable power and lowering costs.

… Compressed Air Energy Storage

While improved batteries offer some long-term hope for innovative storage breakthrough – another technology is proven and ready today – Compressed Air Energy Storage (CAES). CAES technology takes excess energy (increasingly at night) and uses it to force compressed air into an underground or aboveground reservoir. When energy is needed (usually in the afternoon), the air is released to turn turbines and generate electricity.

Compressed Energy Air Storage units can improve the use of wind output, creating a more reliable energy product.

This technology is proven and successful. A 110-megawatt compressed air plant has been in operation for 16 years in McIntosh, Alabama. With the dramatic increase in wind generation and improvements in the CAES technology, it's time to replicate this on a larger scale.

Dr. Michael Nakhamkin, who was critical in the design and technical development of North America's only CAES plant, has been working – not far from Edison's original labs – to improve the CAES technology. His design uses proven, multi-source technologies to reduce costs and improve reliability. CAES technology can be used by electric utility companies, independent power producers, wind developers and transmission owners.

Remember the old shaving commercial where the man says: "I liked the razor so much I bought the company." Well PSEG liked the CAES design so much, we have teamed with Dr. Nakhamkin in a joint venture called Energy Storage and Power LLC to license the technology to customers and provide support for its commercial development.

This technology gives further proof that our most potent energy source remains human ingenuity.

For more information go to *EnergyStorageAndPower.com*

What's your view? Please let us know at Opinion@PSEG.com

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We make things work for you.